

**The Clash of Culture
and the
Contact of Races**

WHERE THE SUN SETS ON A VANISHING RACE

ANU ISLAND (British New Guinea) : See chapter 12.

The Clash of Culture and the Contact of Races

An Anthropological and Psychological study of the Laws of Racial Adaptability, with special reference to the Depopulation of the Pacific and the Government of Subject Races

BY

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WITH A FRONTISPIECE

*" Verachte nur Vernunft und Wissenschaft,
Des Menschen allerhöchste Kraft,
Lass nur in Blend- und Zauberwerken
Dich von dem Lügegeist bestärken,
So hab' ich dich schon unbedingt."*

Goethe, Faust, Erster Thiel [Mephistopheles log.]

LONDON

GEORGE ROUTLEDGE & SONS, LTD.

BROADWAY HOUSE: 68-74 CARTER LANE, E.C.

1927

To
My friend
BRONISLAW MALINOWSKI, D.Sc.,
to whose work and method I have
turned for inspiration

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PREFACE

IN introducing this study, which represents the fruit of researches pursued during the past five years, it may not be out of place to make some allusion to the circumstances which led to its being undertaken.

Soon after the war in 1920 I was given the opportunity of acquiring under the guidance of Dr. William McDougall, at Oxford, a grounding in the psychological and anthropological sciences, which laid the foundations of my subsequent work. With this equipment, I set out to acquire in the field by direct observation a more intimate knowledge of some primitive social organizations differing widely from our own than the most prolonged study of second-hand data in books could have yielded. Special opportunities soon presented themselves of studying primitive communities in the islands of the Pacific Ocean, particularly in New Guinea, and the island groups North of New Guinea, but also among the Maoris of New Zealand, and the natives of Tahiti and to a limited extent the aborigines of Australia.

It was apparent that unless the field of investigation was narrowed within dimensions susceptible to intensive treatment, the dispersal of interest and effort over so wide an area and between such a vast array of problems could yield no positive nor very profitable results within the time limits of the enterprise. For it is an acknowledged principle of scientific investigation that intensive observation should precede the extensive and synoptic review whereby particular phenomena may be related to the general law. Tycho Brahé, the astronomer, in a letter to his pupil the famous Kepler, urges him "to lay a solid foundation for his views by actual observation, and then by ascending from these to strive to reach the causes of things". The ceaseless double question that drives us all according to our temper, either along the road of scientific inquiry or of magical superstition is ever "what is happening and why is it happening?"

The student of the native populations of Oceania is immediately struck by the rapidity of the changes that are taking place. Races that were flourishing a few years ago no longer exist, some that linger on lead lives almost as different from their grandfathers as our own are removed from the early Britons. New populations are springing up, but the old life and the old customs are dying out. Tribes that a short while ago were healthy, warlike, and numerous, are now dispirited, diseased, and weakly. Races are mingling their blood and ethnic distinctions are becoming blurred. Some tribes have (or once had) an abundance of women, in others men far outnumber the women, while a careful study shows that the proportions change in the same localities.

What relation do these problems bear one to another, and to the two processes of adaptation and elimination which together spell evolution ?

The original study from which the present one has sprung was completed in MS. in the spring of 1924. It then consisted of three parts. Part I dealt with " Race Extinction and Race Adaptation ", Part II with " Sex-Ratio Variations as Indices of Racial Decline ", and Part III with " Culture Extinction and Social Integration ". Owing to an unfortunate accident the whole MS. was lost and never recovered. The work has been entirely re-written.

The wasted and additional labour that this loss occasioned may have had its compensation in conspiring to delay the appearance of this book until a more lively and informed interest in its subject-matter has become general. For these interests have been growing rapidly in the public mind in recent years, while they have been slowly maturing in the minds of anthropologists. The great world-shattering changes of the past decade, the War, the Russian Revolution, the Treaty of Versailles, and the consequences of these events, have led men to question for the first time many of the previously unchallenged assumptions implicit in their own civilization, whilst it has prompted them to regard with real concern and a desire to understand civilizations unlike their own.

The first eight chapters formed the substance of a thesis for which the author was awarded a research degree at Oxford. In this part I had the benefit of Dr. R. R. Marett's valuable comments

and generous encouragement, and I also wish to express my thanks to Mr. Havelock Ellis for having been so kind as to read my proofs.

I am greatly indebted to Sir George Knibbs, Director of the Commonwealth Institute of Science and Industry and former Australian Commonwealth Statistician, for some suggestions and advice in connexion with the presentation of my statistical data as well as for his unfailing kindness and encouragement. My thanks are also due to many other friends in all parts of the world whose advice and comments in their own specialist subjects have placed me in the way of obtaining some of my most valuable material. In Australia I am indebted particularly to Mr. E. La Touche Armstrong for accommodation and facilities in the very admirable Public Library at Melbourne and the help of his staff, to Sir Baldwin Spencer for his encouragement and help; to Mr. C. H. Wickens and Dr. Harvey Sutton for statistical data; to Dr. W. M. Strong, Government Anthropologist, and to many friends among men of science, missionaries, and traders in Papua, as well as to her Lieut.-Governor Sir Hubert Murray for his consistently generous and kind hospitality on several occasions both on land and on that famous little yacht the *Elevala*, which will remain among my pleasantest memories of Papua, notwithstanding that I cannot follow Sir Hubert's opinions on native affairs, either as to the facts or the interpretation of them. In British New Guinea (Mandate Territory) I am under a special debt of obligation to the Administrator, General Wisdom, and to Mrs. Wisdom, who so charmingly and so often provided comfort and good cheer to many a returned traveller from some distant and lonely outpost in their territory, and to that keen worker, Mr. E. W. P. Chinnery, Government Anthropologist. In New Zealand I have especially to thank Mr. Elsdon Best who accompanied me into Maori villages, and whose ripe wisdom and intimate knowledge of the Maori is unrivalled; to Dr. Buck and Mr. H. D. Skinner for data and comments within the scope of their special researches; to Mr. Osmond Walker and Mr. Stimson, of Tahiti, for documents and information hard to come by, and to M. Ahne, President of the Société des Etudes Océaniques; to the Government Registrar in Rarotonga, Mr. Savage, for notes and information on early missionary activity in that island; to Dr. Gladys Reichard of Columbia University for information on

the Navaho tribes ; to Dr. Haddon of Cambridge who kindly read early portions of the MS. and who encouraged me to complete the work ; to Dr. C. G. Seligman, whose great classic work on *The Melanesians of British New Guinea* was among the few books I took with me into the field ; above all to Dr. Malinowski, to whom the book is dedicated, who, in spite of his own exceptionally big output and the many calls on a busy University lecturer, yet found time to read through the proofs, and spared himself no trouble in order that a younger brother in his own craft might profit by the wisdom and experience of a master of method. Finally, like most field-workers who have preceded me, I cannot but think gratefully and affectionately of my many native friends in the several islands where I lived amongst them in their own villages.

G. PITT-RIVERS.

HINTON ST MARY.
15th April, 1927.

I

INTRODUCTION AND SYNOPSIS

I

Variations in Racial Adaptability

IN whatever direction we turn throughout the world we may observe the same phenomenon: the clash and struggle for supremacy between races, between cultures and between warring groups—social, cultural, economic or occupational—banded together in defence of their interests. If we look deeper we discover that this competition is not merely for supremacy, but is a struggle for survival. Not all the enthusiasm and rhetoric of purblind idealists—proclaiming the brotherhood of man and a new millenium of universal peace and goodwill—can serve to hide the harsh realities of a concrete world of fact from those who have the will or courage to face them, or from those who prefer to trace the laws of cause and effect rather than seek the delusive comfort of a world of phantasy and wish. Close study of the world of reality gives no assurance of any present tendency towards integration, harmony, and unity, but reveals a contrary tendency towards disintegration and the dissolution of aggregates, whether of empires, nations, races, creeds, or classes. We have indications enough of this process in the six continents of the globe, whence comes a long recital of war, race-riot, revolution, civil commotion, and massacre, more continuous and on a vaster scale than even the chronicles of past history relate.

The principle has long been accepted that competition between species and the selective agency of varied environmental conditions and changes in those conditions (such as have occurred through glaciation, deforestation, local changes in humidity or through migration into different zones) have led to the survival of the better adapted or better equipped species and to the

extermination of others. While these changes have enabled the mammalia to drive out the large reptilia which preceded them, and man to exterminate—often unwittingly—an increasing number of mammalian and bird species, it is recognized that further changes, even the effects of very slight but persistent and cumulative changes in living conditions, in dietary, etc., may conceivably lead to the eventual extinction of the whole human species by the insecta or by increasingly formidable bacteria and other parasitic micro-organisms.

A similar process of selection is constantly operating within a species leading to the extinction of certain types and the survival of others. We are apt to forget that this process occurs also in the human race. It is true we often refer to extinct races of men, such as Neanderthal, Crô-Magnon, etc., some of them, as for instance the latter, with as big a cranial capacity as a modern European, but we are apt to forget that wherever variations occur, whether within a group or between groups that are in close contact, a rigid and ruthless process of selection is constantly operating favouring certain types at the expenses of other types, the cumulative consequences of which lead eventually—sometimes slowly, sometimes fast—to a complete transformation in the people of a locality or a region. When the population expands most rapidly, where migration is most frequent, where there is no bar to mixing and where the original stock is most mixed and heterogeneous, there also must the transformation necessarily be most rapid and complete. This transformation amounts actually and eventually to a complete substitution of population of one type for another. Historians commonly, perhaps unavoidably, assume a continuous and similar racial identity in the population of one region during the period of a long sequence of generations, ignoring the biological changes which may render such continuity of identity an illusion. They often assume, too, that the continuity or evolution of tradition and custom in one locality must connote the continuity of the racial stocks that inhabit it, when in reality there is no such strict correspondence.

Differently endowed (i.e. ethnically and constitutionally distinct) people react differently to the same traditions and to the same social environment, while the behaviour of people of similar endowment is modified by different social organizations and traditions, in relation to which their conduct must necessarily

also be different. To deny this statement would involve a denial of the possibility of there being any correlation between physical and mental variations, or even correspondence between variations in species and appropriate variations in their behaviouristic tendencies. In short, this will be one of the main themes to be discussed. Human history in its totality is therefore a tripartite record which should refer to (a) the history of populations—considered according to their regional organization, inter-related to (b) the history of races considered in relation to changes in, and migrations of, stocks, which, again, is related to (c) the history of culture and its evolution. Between these three aspects or factors of human history there is the closest interaction, but no consecutive or chronological correspondence; since one factor may remain relatively constant, whilst another factor may be completely changed. The history of peoples, geographically distinguished, is very much the easiest of the three to record; yet it can never be completely intelligible and its meaning apparent, philosophically considered, until its relation to the other two is established. The same holds good of the history of culture. Culture, the fruit and expression of man's mental activity, accumulated and transmitted through the generations, is in its origin determined by, and in its evolution both limited by, and modified by, man's capacity—and is variable too in its expression as that capacity is variable.

The general culture level of a people at a particular time is therefore conditioned by three factors; by their heritage of *culture-forms*, traditions, art-forms, beliefs, customs, and social organization; together with *culture-accessories*, implements, weapons, the products of art, and mechanical discoveries, and by their *culture-potential*, a term here applied to innate constructive ability; the capacity to develop, under suitable conditions, artistic, scientific, or technical skill; and temperamental dispositions. Culture-forms are not simply bequeathed to a people and in turn handed on by them intact, but are evolved and modified by successive generations, while at every stage culture is conditioned by the capacity of people to give expression to it.

Although culture-form is conditioned by culture-potential, the inheritance of the two may come from very different sources. For instance, contrast the culture level of the mixed negro populations of the Haiti and Dominican Republics with the

INTRODUCTION AND SYNOPSIS

general culture-level of their white neighbours of the United States of America. Their heritage of culture-forms and culture accessories has been practically identical, but their heritage of culture-potential, which must be correlated with *racial* not *national* history, has been very different.

The great difficulty that has so far retarded the study of racial history and of the anthropological sciences has been that of finding suitable and adequate indices and criteria for the determination of racial distinctions. The difficulty still remains. It cannot even be said that a completely satisfactory definition of the term "race" has been accorded general acceptance. All we can say is that for most anthropologists "race" implies a biological group based on the common possession of an indefinite number of physical characteristics.

Human history is the outcrop of human behaviour; the classification of the crania of extinct or of contemporary men, however valuable scientifically it may be, cannot tell us what they did or what characterized their behaviour as expressed in their social organization, their art, and their achievements; it does not even, up to the present at any rate, give us any certain indication of what they were *capable* of achieving. Yet these are the very considerations that we are most interested in, and that have most value for us.

No science of anthropology or ethnology can afford to ignore the "mind of man", yet we have so far practically no certain and definite psychological criteria by which to determine either individual or ethnic distinctions. It is the purpose of this study to discuss the material for such criteria, and, in the meantime, to attempt the solution of some definite and urgent problems. The evolution of culture-forms must be correlated to the history and evolution of race, for only in this way—by tracing the history of culture-potential, in the mixing, blending, and substitution of racial stocks—can we hope to explain the rise and fall of civilizations, the degradation no less than the development of culture. The correlation of the two must be applied to the interpretation of history as a whole. The further our search proceeds, as we examine correlations and trace effects to their causes, the more surely shall we be led to a recognition of the truth emphasized frequently by McDougall and other inductive workers "that the great condition of the decline of any civilization is the inadequacy of the qualities of the people who are the bearers

of it".¹ A valuable and necessary step in the exposition of this truth will have been achieved when it is possible to correlate mental and physical characteristics in man in such a way as to establish the psychological counterpart of a racial type. For some time past ethnologists and psychologists have been working in this direction. Galton first directed attention along these lines in his *Inquiries into Human Faculty* and his *Hereditary Genius*, while more recently different aspects of this problem have been engrossing the attention of contemporary workers.²

It is of the utmost importance that all terms used by anthropologists should be defined without ambiguity and with the greatest precision. This is a truism, of course, which applies equally to every department of science, though possibly the greatest number of offenders may be found among the ranks of social anthropologists and psychologists. Prominent among the terms used in the course of this work are the three terms, race, population, and culture. Race will here refer, primarily, to ethnic identity and distinction—however determined—without necessarily involving the difficult and uncertain question of ethnic origin. Investigators who have attempted to classify mankind into a definite number of primary races and to unravel the complex racial ancestry of all living races of men have not reached, and show no immediate prospect of reaching any general agreement.³ Since we have only arbitrary and very

¹ *National Welfare and National Decay*, p. 36.

² E.g. In the biometrical work of Professor Karl Pearson, the work carried on under the auspices of the Eugenic Societies of England and America, Dr. William McDougall (in *National Welfare and National Decay*), Dr. C. G. Seligman, Presidential address on "Anthropology and Psychology" to the Royal Anthropol. Inst., *Journ. R.A.I.*, vol. lii, Dr. J. L. Myres (Presidential Address to Section H., Brit. Ass., September, 1922; and *Man*, August, 1922), and Dr. C. G. Jung (*Psychological Types*, Eng. trans., 1923).

³ Definitions of race frequently implicate precarious and speculative questions of origin. One of the obvious objections to such definitions lies in their dependence upon factors that cannot be with certainty determined. Thus, Quatrefages defines race: "L'ensemble des individus semblables appartenant à une même espèce et transmettant par voie de génération sexuelle les caractères d'une variété primitive." (*L'espèce humaine*, p. 28). Durkheim objects to this and similar definitions which, if accepted, make it doubtful whether any existing people could strictly be designated a race. After quoting Quatrefages' definition, he writes: "Si l'on s'en tient à cette formule, l'existence et le domaine d'une race ne peuvent être établis qu'à l'aide de recherches historiques et ethnographiques, dont les résultats sont toujours douteux; car, sur ces questions d'origines, on ne peut jamais arriver qu'à des vraisemblances très incertaines. De plus, il n'est pas sûr qu'il y ait aujourd'hui des races humaines qui répondent à cette définition; car, par suite des croisements qui ont eu lieu dans tous les sens, chacune des variétés existantes de notre espèce dérive d'origines très diverses. . . . D'ailleurs, la conception de M. de Quatrefages a le tort de préjuger la solution d'un problème que la science est loin d'avoir résolu." (*Le Suicide*, p. 55.) We find this tendency to define race in terms referring to some hypothetically fixed number of "primary" races in the whole school of anthropologists who have

imperfect standards of race, and, assuming, as on the Darwinian hypothesis we must, that all peoples are descended from some one original stock, by what logical right can we postulate any definite number of primary stocks or races? Further, by analogy from what we know of the production of new strains of animals under domestication by arbitrary selection, how are we to limit the possible number of distinct human races that have existed or still exist, or deny the possibility that, by the selective agency of ethnic clashes and of changed climatic conditions or other factors, a new strain, or strains, may in the course of time evolve or become "specialized" which shall show a greater variation from any present race than that existing between any two races at present known? There is nothing to preclude such a possibility. Indeed, we know it to be possible, for we have before us such a zoological example as the evolution of the modern thoroughbred horse, where, by the continued agency of inbreeding and man's conscious selection, starting from an original cross we have produced within twenty generations a uniform race or type of horse that differs in all respects so remarkably as the modern racehorse does from his ancestor the Darley Arabian.¹ The term "race" will then for practical purposes imply identity or measurable distinction and a constant degree of relative homogeneity. A race will be said to have become extinct with the disappearance of its last surviving representative of the unadulterated stock. A race survives only in so far as it remains ethnically segregated.

It appears that the effect of selection upon the indefinite number of scarcely perceptible steps by which different varieties of a single species, such as man, seem to graduate into each other tends to produce under conditions of segregation more or less fixed types exhibiting a greater and greater specialization, becoming more closely adapted to narrower circumstances, as taken the name of polygenists. The same objection would appear to apply to a recent attempt by Professor Roland Dixon, an avowed polygenist, to postulate the existence of eight primary racial types determined arbitrarily from certain combinations of craniometrical data. (*The Racial History of Man.*)

Upon this ancient and still open controversy between polygenesis and monogenesis I have no intention of embarking; my object shall rather be to proceed in a different direction, relying upon data that does not implicate questions of ultimate origin, which properly belong to the domain of the archaeologist.

¹ Every thoroughbred racehorse of to-day can trace his descent to one of three imported Eastern stallions. While "out of about one hundred imported Eastern stallions, including Arabs, Barbs, and Turks, only these three are represented to-day in male descent, viz. the Darley Arabian, Byerly Turk, and Godolphin Barb." *Breeding Racehorses by the Figure System*, compiled by the late C. Bruce Lowe, edited by W. Allison, p. 2.

well as a contrary tendency under the opposite conditions of free migration and intercourse, brought about by the crossing of more specialized and differentiated types and resulting in a reversion to a more generalized type with a wider adaptation.

In the application and tracing out of this process among the existing races of man lies the explanation of the laws of racial adaptability. For the penalty of too great a progress in the direction of specialization and narrower adaptation is the inability to become adapted to any drastic change in the environment or mode of living forced upon a type from outside and not evolved by itself. Under these circumstances the type becomes extinct or loses its identity by crossing with other types and begetting more generalized and adaptable offspring. Verifiable demographic data will be produced illustrating this law in connexion with the crossing of racial stocks. These facts show that people are far less adaptable to great changes in culture-form and mode of living than they have not evolved or adapted to suit themselves than is generally supposed. They also serve to illustrate how, on the other hand, all real and permanent advance in culture—depending on an advance in culture-potential—is brought about by that form of selection which ensures greater specialization or the preservation of the most highly specialized types whose influence determines the culture level of a people. Further, it must be remembered that adaptability is not a purely physical but a psycho-physical question. Psychological categories and indices by which to trace this process have so far been lacking; an attempt is made in this work to supply some of the categories relating to specialization and adaptability.

If we want to trace the laws of racial adaptability we have to study the process by which in any selected population, living under the same conditions, some racial strains survive while others less adaptable are eliminated. An analysis of the operation of these laws calls for a revision of many hitherto held opinions on the primary causes of the extinction of certain races, and reveals the inadequacy and the fallacious character of the remedies which are commonly proposed for the removal of these causes. For instance, it is usually assumed that the chief and sufficient cause of the decline or extinction of many Pacific races has been the lethal effects of introduced diseases; prominent among the diseases selected in this connexion as being the most destructive are tuberculosis and venereal

diseases, also influenza, dysentery, measles, malaria, leprosy, filaria, and elephantiasis. Remove those diseases, and, it is assumed, those races that are succumbing to them must become as prolific as before. Or even failing their removal, many of the introduced diseases that are at first most lethal and destructive become endemic and in course of time the population, it is said, becomes relatively immunized to their evil consequences. This, it is thought, together with improvements in hygiene and living conditions, is sufficient to account for a people, who have survived the first shock of altered living conditions and the introduction of new diseases, once again becoming established. But here again an analysis proves that there is no correlation between either the incidence or the mortality of diseases and the survival or disappearance of a racial strain. Examples are given of a low incidence of these diseases in races which are disappearing in close contact with races where their incidence is much higher and where the population is at the same time increasing most rapidly. Also it can be shown that neither improved hygiene nor many of the other supposed ameliorative conditions are capable of preserving an unadapted race from extinction, while under the very same conditions and influences different and more adaptable strains survive and take the place of the former. We shall find, therefore, that in place of the supposed immunization a *total substitution of population takes place*, which is quite a different thing.

2

The Rival Schools in Modern Anthropology

The problem, then, that confronts the student of culture is the relation of culture to race? The question appears to be in danger of being obscured by the antagonism of different schools of thought. On the one side there is a tendency to look upon culture-forms as the psychic reflex of a biological evolution by which similar or identical culture-forms (beliefs, ideas, customs, etc.) could arise independently as the outcome of laws of psychological growth and evolution. These views, which are more particularly associated with the work of Tylor, Westermarck, and Frazer, have been contested by a school of thought associated more particularly with Professors Elliot Smith and W. H. R. Rivers, which is apt to look upon the evolution of culture as an

historical growth whose progress is virtually independent of any stage of mental evolution which could be held to modify its form and the course of its development.¹ Then there is a school dominated by the geographical approach to the subject. Professor Huntington may be looked upon as representative of this school. The geographers, rejecting all other solutions, insist upon explaining all ethnological questions in terms of "climatic control". Finally progress in comparative anthropology and the collaboration that the social anthropologist invokes from biologist, psychologist, and demographer, has led among a few workers to what is best described as the functional method in anthropology. It consists in the functional analysis of beliefs, customs, and institutions. It explains the data of anthropology by their function, by the part they play within each cultural system, and by the relation that each integral element of a culture bears to the others and to the physical environment. In its interpretations it is diagnostic, in its method it is inductive. This view insists upon the principle that "in every type of civilization, every custom, material object, idea and belief fulfils some vital function, has some task to accomplish, represents an indispensable part within a working whole."²

The functional anthropologist, while he studies man in his relation to society, must at the same time study the laws of his individual behaviour, which are the outcome of his mental and bodily processes, for one conditions the other. Hence the functional anthropologist must call in aid biology and psychology. There are, therefore, three departments within the scope of functional anthropology. Firstly, the collection, selection, and classification of data—the description of observable facts. Secondly, the inductive synthesis of facts leading to scientific hypotheses. Thirdly, the application of the laws and hypotheses

¹ Cf. Elliot Smith's note to Rivers' *Psychology and Politics*, his appendix to *Conflict and Dream* by the same author, his article in the *Monist*, January, 1923, and his Galton lecture, 1924; *Eugenics Review*, vol. xvi.

Although the evolutionary school of anthropology is prepared to believe that similar culture-forms may, and sometimes do, arise independently, they have ever been prepared to accept any clear evidence of diffusion, and neither Tylor nor Frazer assumed, as their opponents are too fond of accusing them of doing, that all similarities are necessarily due to independent origin and development. Westermarck does a service in pointing out that the standpoint of the psychological or evolutionary school is not usually fairly represented by its opponents, and in this respect he convicts Rivers of falsely defining the evolutionary approach in order to refute it. Op. cit., *History of Human Marriage* (5th ed.), I, pp. 2-13.

² Malinowski.

arrived at to general anthropological problems.¹ The functional method thus supplies the right theoretical foundation for application to the practical problems that are the concern of government and administration.

Each of the earlier schools shows a tendency to fail to discriminate clearly between culture-form and culture-potential. The most recent of them, the historical and diffusionist school, insists that all modification in culture and the development of culture have been brought about by the direct contact of civilizing agents, who at different periods during historic and prehistoric times have migrated all over the world in search of pearls and precious metals, and that the great diversities in culture everywhere observable are to be attributed to the presence in remote times of these agents. They claim, too, that these agents disseminated at different times and at different stages of development a culture, which had its origin in Egypt, and that this historical process may be traced in America, Oceania, Indonesia, and India. This earliest known food-producing civilization is characterized by the practice of mummification and irrigation, by the construction of megalithic monuments and dolmens, by the manufacture of neoliths, by pearl fishing, by gold mining, and by a dual organization; and by the presence of remains of these things throughout the regions named it is claimed this early civilization can be traced. This school depreciates the idea that culture could have developed independently along similar lines, or that it is logical to suppose any such thing as a psychological evolution exhibiting at different stages specific ideational tendencies, such as a tendency to evolve totemic ideas, taboo systems, theogamies, etc. While acknowledging the importance of tracing and allowing for all such modifications in culture-form that may either be historically recorded or even assumed to be possible, this school appears to ignore the fact that culture-potential cannot be directly modified by outside changes in culture-form, and that though it may be true that it is absurd to suppose that a tendency to think certain definite ideas can be inheritable, it is quite a different thing and equally absurd to suppose that a tendency

¹ For the best statement of the method and aims of functional anthropology, see article by B. Malinowski, "Anthropology," in the thirteenth edition *Encyclopædia Britannica*. In this school can also be counted, in my opinion, Professor Radcliffe-Brown of Sydney, Professor Lowie of California, and Professor R. Thurnwald of Berlin. With this school, too, generally speaking, the author of the present work identifies himself.

to think—not certain things but—in a certain way may not be inheritable. For instance, we may point to the differences in thought tendencies that are exhibited by different people under the same cultural influences, and we may point to cultural and temperamental incompatibilities and differences which are reflected in the political and religious antagonisms that divide communities and even members of the same families into hostile groups, or the differences in the thought tendencies of children and adults, or to the similarities—well illustrated in Frazer's *Golden Bough*—between people living in savage communities and groups or sections living in civilized communities.

Culture growth viewed as a whole is, as we have seen, compounded of a diverse plural heritage: inherited culture-forms, inherited culture-accessories, and inherited culture-potential. We are dealing with a complex made up of something acted upon (culture-form) and yet conditioning and limiting the actions of agents who act through it, variously according to their individual and innate capacities and predispositions. Some mechanical discovery—such as the introduction of steam, industrial machinery, electricity, etc.—or the sudden acquirement of some imported culture-accessories may in a very short space of time modify or revolutionize the culture-forms—in particular the social organization—of a people. It may also by this means, and by bringing about a great expanse of population, bring new selective factors into operation which will result in the survival in new ratios of different types in the population or the extinction of some types, and thus indirectly influence the culture-potential of future generations. Viewed apart from one another, the evolution of each may be traced separately. Thus the evolution of culture-accessories (weapons, implements, and art motifs) was studied many years ago by General Pitt-Rivers, who, in his museum collections of specimens illustrating the arts and crafts of various races, was the first to apply the theory of evolution to man's handicraft. His system is now being carried on by Mr Henry Balfour. The attempt to trace the intricate history of culture-forms has recently been undertaken by Professor Elliot Smith and by others of his school. The theory of this school involves, however, the misleading assumption that culture-forms have on all occasions passed inseparably attached to certain culture-accessories, whilst no allowance is made for variations in culture-potential. The history of the evolution of culture-

potential in terms of psychological functioning has still to be written, though Galton, Frazer, and the psycho-analytical schools of Freud and Jung have each contributed along different lines towards this branch of the science of culture. The study of culture must develop also in conjunction with the study of race and race mixture. Not one of these three lines studied alone can give us the true story of the evolution of culture, of culture growth, and culture degradation.

3

The Practical Value of Anthropology

There are still to be found people who ask: What is the use of anthropology? Are we not the greatest and most successful colonizing empire in the world? Have we not conquered and administered more races in every continent than any other nation for their good and our own profit, with little or no knowledge of anthropology? And to our complete self-satisfaction? And the questioner may proceed to expatiate on the greater practical use of a sound public-school and university education, and of knowledge how to handle men, which is said to have been learned on the playing fields of Eton. Is not this the training we want, and which our tradition upholds, rather than familiarity with a science which deals and dabbles in uncouth and musty relics, dry bones, and savage obscenities?

Such questions are not only asked by the ordinary layman, they are sometimes asked by men in our administrative services, even men who, maybe, have spent a life-time among subject races, without either discovering any need for a greater knowledge of the people they rule over, or even discovering that there was any more to be learned about them.

This teaches us that this attitude has to be met, that this sort of question must be answered, and that the public must be educated in these matters. They must be convinced that anthropologists desire to help, not to hamper; that if they have to criticize, and if they understand their subject, their criticism will be constructive and helpful. In every other branch of science such criticism and help is sought, not resented by the man of affairs. Yet there is abundant evidence that in the business of administering backward and subject races science has never been so urgently needed as to-day. It is true that social anthropology is the newest of the sciences, but

its existence and progress has largely been due to the new need for it. The existence of an applied science is perhaps always a response to a need for it. The politician, soldier, and war-contractor eagerly enrol the chemist, the physicist, and the engineer in their services when they need engines of destruction and mutilation for the wholesale slaughter of men in battle. Is it less profitable to enrol the service of those who study the technique of saving life and the causes that produce human contentment?

In general terms, then, the answer to the questions we may be asked is this. We cannot successfully administer nor trade with native races, nor use native labour without knowledge of native culture. Knowledge of native cultures cannot be gained by the amateur and unmethodical observations that are the stock in trade of travellers' tales and South Sea romances. It can only be gained by scientific method; by the consistent application of insight and common-sense to facts, and the use of past experiences for future guidance.

Thus practical knowledge of savages requires anthropology. But it must be the right sort of anthropology. The curio-hunting chase after the unusual and the sensational is as useless as are conjectures about hypothetical origins and imaginary histories. The only scientific work useful for practical applications consists in the functional analysis of beliefs, customs, and institutions—in one phrase "functional anthropology".

It is often forgotten, or the fact ignored, that culture-potential often varies enormously within a single society that is supposed to exhibit a uniform culture. In the great nations of modern Europe with their heterogeneous populations and mixed ancestry the diversity of culture and culture-potential between different classes and groups and even between different individuals of the same class may well exceed the differences between many centuries of growth in more homogeneous societies.

Allusion has been made to the facts which suggest that people are far less adaptable to great and sudden changes in culture-form than is generally supposed. A better method of investigation, a more exact use of terms, and a closer study of demographic facts will show that the supposed ability to "raise a people in cultural level", as also the phenomenon of a degradation of culture is, in either case, dependent upon a blood substitution in the population.

The establishment of these facts has an important practical

bearing on the problem of the administration of subject races and of "savages"; the so-called Native Problem and the problem of "native unrest". For the comprehension of them shows that the inevitable result of destroying all the old culture-forms and environmental conditions in the endeavour to impose too dissimilar a culture upon a people specialized by a long process of adaptation to particular conditions is actually to exterminate them.

Apart from a searching demographic analysis the facts, however, are apt to be obscured by the gradual infiltration of foreign blood into a declining population and the frequent inability to discriminate between the unadaptable and unmixed stock that is declining and the new miscegenate stock which is capable of surviving under the changed conditions.

It follows from this that all Missionary endeavour among heathen and savage peoples, because in endeavouring to impose new and incompatible culture-forms it is bound first to destroy the old ones, is incapable of achieving any result in the end except to assist in the extermination of the people it professes to assist. It is the business of all scientific workers to trace the immutable laws of nature, however unwelcome or even deplorable the facts may seem.

A necessary phase in the process of inductive synthesis whereby we hope to arrive at scientific hypotheses and laws is the establishment of correlations. In order to prove the theory set out here it is necessary to direct attention to certain correlations which I believe can be established. The data on which I hope my conclusions are legitimately based are for the most part demographic.

That the facts have not yet been satisfactorily diagnosed is generally admitted by anthropologists. At the Wellington meeting of the Australasian Association for the Advancement of Science, held in 1923, Section F (Ethnology and Anthropology), passed, among others, the following resolutions: "That in view of the extinction of many of the native races in the Bismarck Archipelago, and other parts of the Australian and New Zealand dependencies, and of the rapid and unchecked decline now being witnessed in many of the remaining ones, this section is impressed with the urgent need for instituting an immediate inquiry in order to determine the causal factors of this decline, which have not as yet been satisfactorily diagnosed.

"With this object in view it will be necessary to institute new methods of recording annually certain information on the vital statistics of primitive races within the areas of control."¹

In order to carry out this work a committee, in which the writer was included as a member, was appointed.

Without claiming that anything like finality has been reached in the task, the results of a somewhat laborious analysis and a review of many facts can now be offered for critical inspection.

Among the principal propositions, arrived at by analysis of demographic facts, which support the general argument, are the following :—

1. Disturbances in the sex ratio of reproductive adults are correlated to the capacity in the population to increase or decline respectively.

2. Progressive surplusage of males is an index of decline.

3. A stabilized or increasing population exhibits a tendency to produce a surplus of adult females of reproductive age over adult males.

4. There exists a general and universal tendency (common to all polygynous species including man) for polygynous communities to replace polyandrous communities which tend to die out. Since very few (if any) human populations or groups produce an exact equality in the number of the sexes at reproductive age, practically all groups fall into one category or the other. The facts show that the monandrous woman outbreeds the polyandrous woman—in other words, polyandry hinders reproduction.¹ In every community there exists a tendency for the men to become polygynous to the extent that the ratio of women to men makes possible. Frequently, however, they are polygynous even when the ratio is unfavourable, but in no community do we find any appreciable proportion of the adult males remaining permanently celibate. It follows, therefore, that if the men exceed the women, the women become polyandrous, and if the women exceed the men, a greater number of men become polygynous and a greater number of the women remain monogamous, or, more strictly, monandrous. Thus polygyny, not monogamy, of the men becomes the real alternative to the polyandry of the women—in other words, polygyny is the

¹ *Proceedings, Australasian Association for the Advancement of Science*, vol. xvi, p. 45 (1923), and *Interim Report*, vol. xvii, pp 113-19 (1924).

only insurance of the general monogamy or more strictly, the monandry, of the women.¹

5. The progress of miscegenation is correlated to variations in the balance of the sexes.

6. The influence of miscegenation brings about a change in the adaptability of a stock, the hybridized stock being more adaptable to changed conditions, but less adaptable to the unaltered or constant conditions that suited the more highly specialized stock. Cross-breeding will therefore only promote growth in population when a revolution in living conditions renders the purer stock unadapted to them. Variations in masculinity as the result of miscegenation are conditioned by this fact.

¹ It should, of course, be understood that polygynous and polyandrous matings, not legal or religious marriages or marriage customs, are referred to. The general validity of the premises must be accepted provisionally. The nominally monogamous marriage system of Christian countries ill conceals the large proportion of polygynous and polyandrous matings; how large, it is impossible to determine exactly. Among Oriental and barbarian peoples practically all women are absorbed in marriage, Westermarck has failed to find any evidence of any savage people observing a monogamous system that involved the celibacy of a considerable number of women. Cf. *History of Human Marriage*, iii, p. 64.

II

THE PROBLEM OF DEPOPULATION

REVOLUTIONS brought by the constant flux and change that mark the time process pass unnoticed by the multitudes who ignore the far-reaching and cumulative consequences of a gradual process, yet shout alarm at any sudden or dramatic change of far less relative importance.

There are many ways whereby one race may exterminate another race, but the ways that are most certain and complete are neither the best known nor the best heeded. Wars, massacres, famines, and epidemics may be the outcome of a clash of two races. Though sudden and violent in their effects upon population, these events far less frequently change or exterminate a race so surely or so completely as the process of extinction that works silently and slowly through the agency of selection, through mixing in marriage and the prepotency of one race, through differential birth-rates and survival rates, through the earlier marriage of members of one race, through their greater stamina and powers of resistance under equal stress, or through changed environmental conditions more favourable to one race than to the other. By these means one race may absorb or extinguish another race; but because the substitution takes place gradually, and to the untrained observer, invisibly, it is often ignored or the facts are denied. Apart from the existence of humanitarian sentiments, often irrelevant and for the most part quite unreasonable, there should be no reason for members of a superior race to regret the gradual extinction of an inferior race if only the future enrichment and welfare of the world is considered. There is, however, no greater certainty that a superior race will survive an inferior if the two mix or meet than the contrary. Neither is it certain that, in a strict sense, either race will survive the process of miscegenation; if two races mix readily the characteristics of both may suffer gradual obliteration by adulteration.

There are then three ways by which one race may extinguish another. One is direct ; by the violent or sudden forces of war, massacre, or the introduction of diseases. These means alone do not appear to succeed in completing the destruction of a race, for, being ephemeral agents, the race, if it possesses the viability, will always tend to spring up again, however much it may have been reduced, when the action of these agents relaxes or ceases. The second way is the gradual substitution of one race for another by means of a differential birth-rate and survival rate. Thirdly, when two groups of people mix freely and evenly the characters of the two types suffer a degree of obliteration and the hybrid descendants may tend either to blend or to revert to the type of one or the other parent—usually the more primitive of the two—or to a remote ancestral type. It is frequently forgotten how rapid and extensive the ethnic effects of inter-marriage can be. In a population in which two types inter-mingle, and in which both types occur with equal frequency, Professor Franz Boas calculated that in the fourth generation there will be less than one person in ten thousand of pure descent. When the proportion of the two original types is as nine to one, there will be among the more numerous part of the population only eighteen in one thousand in the fourth generation of pure blood.¹

The result of the intercrossing of two or more types need not, and according to biological theory will not, necessarily originate a new or middle type. According to Boas and other authorities there is, for instance, a tendency in the offspring of American Indian and white parents to revert to either the paternal or maternal type. When there is intercrossing the reversionary tendency is presumably, as Darwin showed to be the case among plants and animals, to the more primitive or remote ancestral type, the more primitive, i.e. less specialized, of two crossed strains having the greater " prepotency ".

Returning to the more obvious and best known aspect of the problem, which has received most attention because of its conspicuousness, we shall consider the decline and fast disappearance of the actual population of many of the native races of the Pacific. In spite of the attention it has received in recent years, there is little indication that it is now any nearer a solution or more correctly diagnosed than at first. It is, at any

¹ Quoted by Maurice Fishberg, *The Jews*, p. 219.

rate, still urgently in need of a fuller and more systematic investigation than it has yet been accorded. To attribute the decline generally and vaguely to the inevitable result of the encroachments of civilization upon the primitive peoples not yet ready to adapt themselves, though possibly true, neither helps us very much in the task of prevention, nor in determining the actual factors that bring this result about. When an examination is made of the alleged causal factors, it is found that those most commonly invoked are apt to refute one another, while the remedies proposed are equally conflicting, and as likely to aggravate the conditions they seek to remedy as to alleviate them.

During the past fifty or sixty years the dying out of the native Pacific populations has frequently been the subject of official and unofficial inquiries, and it is remarkable that there is as little agreement on the subject now as when it was first investigated. Not only does the failure in diagnosis remain as evident as before, but little or no progress has been made in methods of investigation. No satisfactory system or method has been established, and, largely in consequence of this, during the whole period few exact vital statistics are obtainable which might throw light upon the matter and establish the correctness or otherwise of diagnostic attempts.

The fact that the populations of a great number of the islands of Melanesia and Polynesia and other parts of the Pacific are actually declining, and in many cases have declined to the point of extinction, is beyond dispute. Notwithstanding opinions to the contrary, all available evidence tends to show that the decline has been progressive only since European occupation. It may safely be accepted as beyond serious dispute that "in all parts of the world there existed among primitive races, before they had been subjected to European or other outside influence, customs, the primary function of which was the restriction of increase. . . . The evidence shows customs restrictive of increase to have been so widespread, in the form either of abortion, infanticide, or prolonged abstention from intercourse, as to have been practically universal."¹ Fears of too rapid an increase of population can only be based upon an experience of its likelihood, and upon its encroachment upon the margin of subsistence. A disappearing race has neither a fear of

¹ A valuable summary and guide to this evidence has been collected by Mr. Carr-Saunders in an Appendix to his *Population Problem*; also p. 215.

redundancy, nor any inducement to restrict fertility. It is therefore absurd to assume, as some people do, that the existence of customs that were in being in order to check too great an increase of population were at the same time an indication of a failing population.

A recent writer remarks in *Essays on the Depopulation of Melanesia*: "Anyone who has been a few years in Melanesia will have noticed between the time of his arrival and his departure a distinct difference in the number of people among whom he is living; the longer his stay lasts the more marked becomes the fall in the population. Whether the people had begun to decline before the advent of Europeans is unknown; personally, I should say there was no decline, but rather a tendency the other way." (Rev. W. J. Durrad.)

Dr. W. H. R. Rivers in the same work corroborates the opinion of Mr. Durrad: "It has been supposed," he writes, "that the Melanesians were already a dying people before the European invasion and that their decline was due to faults inherent in their own culture. In the first place there is no evidence of any value that the people were decreasing in number before the advent of Europeans."

Nowhere in the Pacific is the phenomenon of the disappearance of the aboriginal races more noticeable than in the islands of the Bismarck Archipelago, where European control last made its influence felt. In these islands the rapid decline, even during the last twenty-five years, is well known and admitted officially. It is more marked among the more purely Polynesian and Micronesian peoples than among the more purely Melanesian peoples. Among the latter there is—except in New Ireland and Lavongai (New Hanover), where the native has died out to such an extent that recruiting in large districts on these islands had to be prohibited—less evidence of so marked a decline.¹ When the German writer Parkinson visited the Archipelago, previous to publishing his book *Dreissig Jahre in der Süd-See* in 1907, he recorded that only 60 of the Anchorite Islanders were left. They have now disappeared, and have been replaced by imported indentured labourers from other islands of the Group. On Luf,² Hermit Islands, there were then only eighty

¹ Vide *Report on the Administration of the Territory of New Guinea*, July, 1921, to June, 1922, p. 152.

² Parkinson attributed the system of polyandry which had grown up on the island to the recent phenomenon of a shortage of women, op. cit., p. 222. *

aboriginals ; these had dwindled by 1921 to a remarkable little village of twenty individuals, all old men and old women past child-bearing age. In the Ninigo Group 400 had survived ; in the North-Western Islands the decline had been very marked from the time the first white man went to the islands only about twenty years ago. It was on one of these islands that I was able, in 1921, to make some investigations into the decline of the population. On Manus or Allison Island the aboriginal race is extinct.

All the evidence that exists points to a redundant population before the arrival of Europeans into the Pacific. Robert Louis Stevenson, writing in 1888, remarked upon the large number of deserted and dwindling villages which formerly supported flourishing populations, and refers to other instances of a former state of prosperity. He remarks : " Over the whole extent of the South Seas, from one tropic to another, we find traces of a bygone state of over-population, when the resources of even a tropical soil were taxed, and even the improvident Polynesian trembled for the future." ¹

Wallis was astonished at the numbers of the population of Tahiti in 1767, and when Cook made his second voyage to the island in 1774, he found a population that he could hardly trust himself to estimate, although disease and war had already begun to reduce the population since Wallis's visit. Yet at Pare Arue he saw a fleet of one hundred and sixty large double canoes, preparing to set out against the neighbouring island of Eimeo (Morrea, or the Omoo of Herman Melville). This fleet he calculated could not have contained less than 7,760 men, allowing forty to each large canoe and eight to the small ones, and it was a contingent of only two districts, Atahuru and Ahurai ; a number which was afterwards increased until he estimated over 9,000 men, " an astonishing number to be raised in four districts. . . . If we suppose every district in the island, of which there are forty-three, to raise and equip the same number of war canoes as Tettaha, we shall find by the estimate that the whole island can raise and equip 1,720 war canoes, and 68,000 able men, allowing forty men to each canoe ; and as these cannot amount to above one-third part of the number of both sexes, children included, the whole island cannot contain less than 204,000 inhabitants ; a number which at first

¹ Stevenson, *In the South Seas*, p. 35.

exceeded my belief. But when I came to reflect on the vast swarms which appeared whenever we came, I was convinced that this estimate was not much if at all too great."¹

Arii Taimai, with all available sources of native information at her disposal, as a matter of fact, considers Cook's figures an underestimate, neither does she consider, on the evidence, that Cook's estimate of the population of Papeete and Eimeo together at 40,000 inhabitants excessive. "Modern writers," she affirms, "without a shadow of reason, have rejected his evidence, but all other evidence confirms it." The population of the island was known to be excessive and infanticide was enforced to keep it from exceeding the available food supply. "A single bread-fruit tree was often owned by two or more families, who disputed each other's rights of property over the branches."² The population which according to Cook's estimate exceeded 200,000 in 1767, numbered less than 20,000 in 1797, according to the missionaries of the Duff, and in 1803 barely 5,000.³

In New Zealand no proper census of the native population was taken until 1906. Previous to that date, only more or less unreliable estimates are obtainable. Governor Grey's estimate in the year 1849 gives a population of 120,000. Subsequent estimates show dwindling figures until the figures of the Colonial Government in 1896 show a population of 39,854. Since 1901 there has been an apparent slight, but steady, increase.

Before the Maori population was reported to be on the increase again, this remarkable and rapid decline gave rise to much speculation as to its causes. Thus in 1881 Dr. A. K. Newman writes: ⁴ "The rapid decrease of the Maoris is a startling fact when we recollect that for the last fifteen years they have had no devastating wars; that of late they have been living in peace among themselves, and in the South Island have not fought the Europeans or among themselves for thirty years. Formerly the tribes were always at war with adjacent tribes, and when not fighting were continually destroying each other's crops. Formerly their food was hard to get, and poor

¹ Cook, *Second Voyage*, i, 324. His estimates find a general confirmation in John Reinold Forster, the scientist who accompanied him, whose *Observations* see p. 222.

² *Memoirs of Arii Taimai*, see p. 237, *infra*, where further reference is made to her evidence.

³ *Turnbull's Voyage*, iii, p. 78.

⁴ "On the Causes leading to the Extinction of the Maori", by A. K. Newman, *Trans. N.Z. Inst.*, vol. xiv (1881).

when got: now the supplies are regular and far more nutritious . . ." In view of this "inexplicable" decrease under progressively "improving" conditions, Dr. Newman, like many other baffled investigators before and since, contends, though without being able to adduce any evidence for his opinion, that the Maori were a dying race before Europeans arrived. He finds comfort, however, in the thought that "the disappearance of the race is scarcely subject for much regret".

Dr. Rivers, during visits to Melanesia in 1908 and 1914, reports a rapid decrease in native populations of the New Hebrides and in the Sandwich Islands. According to the figures quoted by Darwin in his *Descent of Man* the native population of the Sandwich Islands decreased no less than sixty-eight per cent in the interval of forty years between 1832 and 1872.¹ On many islands Rivers reports the entire disappearance of the inhabitants of several villages, whilst in the Santa Cruz Group, large islands which were said to have been well peopled are now uninhabited, the decline having been especially great during the last few years.²

The causal factors in the decline are not easily determined, since it would seem as though the same influences produce varying effects when operating on different races and at different periods. Thus, while the Marquesans declined exceedingly rapidly during the first fifty years of contact with Europeans—according to Stevenson the population in that part declined in forty years from six thousand to less than four hundred (op. cit., p. 28)—the Samoans were at the end of the same period, by all accounts as fertile as at first, and the population of Tahiti, after a period of alarming decrease, had again become stationary. The Maoris, as already noted, after the first period of rapid decrease extending over two or three generations, left descendants who appeared to have become inured to the new conditions and the population started to increase again. In spite of the observable fact that depopulation in the Pacific Islands is not universal the great contrast between the former almost universal condition of crowding and the present decline points to the operation of new and effective causes. We are still asking to-day, as Stevenson asked in 1888: "Why this change?" And we have the same reason for rejecting the solutions of those

¹ Op. cit., p. 288.

² Ref. *Essays on the Depopulation of Melanesia*.

who base their answers on knowledge acquired by acquaintance with only a single group, for their arguments can be refuted by evidence from another group. Only the widest possible survey of causes and a synthesis based on general principles can hope to give us a solution. For as Darwin wrote: "although the gradual decrease and ultimate extinction of the races of man is a highly complex problem, depending on many causes which differ in different places and at different times; it is the same problem as that presented by the extinction of one of the higher animals—of the fossil horse, for instance, which disappeared from South America soon afterwards to be replaced, within the same districts, by countless troops of the Spanish horse."¹

¹ *Descent of Man*, p. 297.

III

"THE NATIVE PROBLEM"

I

What is meant by the "Native Problem"

UNDER the vague and somewhat ambiguous title "Native Problem" are grouped all the problems and difficulties that have arisen in every part of the world where European Christendom has taken over the control of the destinies of backward and dark-skinned races. The term itself and the constant references that are made to it in connexion with the almost ubiquitously existing state of unrest among subject races under European tutelage imply that the "problem" is unsolved. Western civilization has assumed control of subject races but has as yet failed to stabilize the relation between subject and ruling race and between two incompatible cultures. But the problem, so long as it remains a problem, has two sides to it. There is the problem of realizing the white man's interests in a black man's country, that is the former's aspect of the problem; and there is the black man's problem, the problem of maintaining his own existence, identity, and welfare. Neither side should be considered without the other, for they are both part of the same problem. In practice this is far less often remembered than might be supposed.

Dudley Kidd, in his penetrating study of the Native Problem in South Africa, lays stress on the necessity of an intimate knowledge of the native as a preliminary to any discussion of the problem. "The Native Problem is the problem of the native. This is so obvious when once stated that one would be ashamed to say it unless it were so constantly forgotten. It is fatally easy to set up in the mind some unreal image of an oppressed and voiceless black man, who is too gentle and peaceable, and withal too guileless, to provoke hostilities except under the most provoking oppression of some wicked white men. This mental image affords a splendid occasion for giving expression

to that most pleasurable and luxurious of all emotions, indignation and pity. A meeting is held, and there is set up an emotional storm in many a tea-cup; the actual savage is lost sight of, and the 'brutality' of the colonist and the humanity of the people at home are apt to become the twin-centres of what the Kafirs call a crab's dance. The question then ceases to be the *native*, and becomes the *white*, problem. Under the influence of prejudice or passion, the native, who is the subject of the contention, is lost sight of; and the real war is waged round such problems as the moral character of the colonist, the nature of the British Constitution, or the abstract idea of justice, for everyone thinks he knows all about these things. The Kafir becomes the ostensible subject of debate in which people exploit their special and peculiar obsessions. The argument becomes practically independent of the actual Kafir of the kraal, and would not be modified much if the aborigines of South Africa were Siamese, Red Indians, or even Martians. Every conceivable side-interest, prejudice, and false analogy is discussed by these people, whom Carlyle would call Professors of Things in General, and who entirely ignore the real wishes of the Kafir."¹ Many well-intentioned philanthropists, and members of Aborigines Protection societies, or societies for missionizing the heathen, engrossed in the problems of their own ethics and their own sentiments, which they feel convinced should be shared by the savage they know little or nothing about, are foremost among those who obscure the question in their absorption in an irrelevant hobby.

The Native Problem and its attendant Problem of Native Unrest is complementary or alternative to the problem of native decrease and extinction. In fact, the Native Problem might well be defined "the problem created by the survival of those native races or their hybrid descendants that have not been exterminated by the 'blessings of civilization'". That is to say, there is no native problem in Tasmania and only one of very little importance to the European population in Australia, for the very good reason that the Tasmanians are no longer alive to create a problem, while the aborigines of Australia are rapidly following along the road to extinction.

Sentimental considerations being irrelevant to any work with scientific pretensions, their rigorous exclusion may be

¹ *Kafir Socialism*, pp. ix, x.

expected in the course of the following remarks: Without the hint of such a weakness, we may, perhaps, give pause to the thought that had some omnipotent Machiavelli, actuated only by the needs of the white races and in the interests of order, determined deliberately to exterminate the natives of those regions alone that were best suited to the habitation of Europeans, such as the temperate regions of South Africa or North America, and to maintain on the other hand the natives inhabiting the unhealthy tropical regions where their labour was indispensable, he would for the most part, excepting in a few countries such as the Southern parts of Australia and Tasmania, have accomplished precisely the opposite to that which we, acting under the compulsion of a tangle of conflicting motives and a concatenation of forces we have neither attempted, nor been able, to control, actually have accomplished. In North America the white race fears the consequences of the rapid increase of the negro stock which is in danger of outbreeding it. The white colonists of South Africa are growing conscious of a similar concern; yet in the sweltering and fever-stricken islands of Melanesia and Polynesia we are fast exterminating the races which, apart from all other considerations, it is in our best interests to preserve.

If, then, we momentarily turn aside from the problem presented by the depopulation of those islands which we of the white race can never hope to populate with our own descendants—if we except half-caste descendants—we are confronted by the problems created by races which not only fail to become exterminated in the process of being morally and culturally “uplifted” but fail entirely to become reconciled or contented under European control. This world-wide phenomenon of recalcitrant and irreconcilable black races is sometimes referred to as the “Native Problem”, and sometimes by Stoddard’s more dramatic figure of speech “The Rising Tide of Colour”.

The problem exists throughout the world. We see this in South Africa, with the growing insistence on its Native Problem; in America with its Negro difficulties becoming every day more acute; only owing to his fast dwindling numbers the Red Indian and the Eskimo are less anxiously regarded; in India and Egypt with their tumult and agitations for self-government; in the surging aspirations of Pan-Islamism; in the anti-foreigner and anti-Christian agitations in China; even

in New Guinea, where the problem is newest, and the natives still inarticulate, we are constantly reminded of the growing difficulties in securing native labour to run the plantations and their growing insubordination or disinclination either to work themselves or to breed workers for the white man.

In 1922 at a meeting of the Advisory Council of Northern Rhodesia at Livingstone, that body submitted proposals for the "cure" of native unrest in Africa. According to the published report in the *Livingstone Mail*, it was stated on behalf of the Council that these signs of unrest, "apparent before the war, had been emphasized by and since the war. Native discontent was spreading and deepening, and was rendered more serious by a growing sense of race consciousness and solidarity." But Rhodesia presents no isolated example. From the Cape, Natal, India, Burma, all over the Pacific and in America come similar reports.

2

"Progress" and Racial Antagonism

A feature of considerable interest and importance in connexion with this world-wide unrest among subject races and their revolt against European tutelage, lies in the fact that the movement is articulated and led to a marked degree by those members of subject races that have been most closely under the influence of our proselytizing culture and who have, in the process, assimilated most "successfully" European education, European religion, and European blood. In South Africa as in America it is the mixed-bloods, negros and Kafirs with white blood in their veins, who lead the revolt against the white man's influence. A characteristic expression of the revolt from this quarter is contained in a book by Dr. W. E. Burghardt du Bois,¹ a mixed-blood who is described as one of the leading spokesmen of the negro world. This author regards all coloured peoples as inevitably hostile to the whites, who have so long ruled them, and predicts a world-wide rebellion when they feel themselves strong enough to obtain the mastery. Another mixed blood, Mr. Molema, grandson of a Christianized Bantu, claims to speak for the Bantu in his indictment² of the white race, from whom the

¹ *Dark Water*, 1920.

² *The Bantu Past and Present*, 1920.

Bantu has assimilated the religion that "spells enlightenment and equality in the sight of God", and the political doctrine of democracy. "Every educated member of the Bantu race," he claims, "is directly or indirectly a product of the mission school." He shows, however, with bitter insistence how little the lesson that the "civilized" Bantu learns from his white teacher is calculated to reconcile him to white control, or to mitigate the growing intensity of the struggle and hostility between black and white. The process of native education on European lines serves to stimulate the antagonism of the white man, for it means that the coloured man as he becomes divorced from his native life and occupations and is equipped for trade and skilled handicraft, becomes a competitor, instead of being merely a hewer of wood and drawer of water. At the same time, the religious and social teaching which the Bantu receives from the white man, inculcating the idea of an equality of rights and conditions, fosters and accentuates his resentment at the contrast between Christian theory and practice. The author of *The Bantu Past and Present* argues quite plausibly that the more democracy and self-government for white men has gained ground, the worse, as a rule, it has been for the South African natives. The consummation of the Union of South Africa as a single self-governing Dominion resulted in restricting rather than enlarging the political rights for the coloured men.

The nature and the growing influence of some of these causal factors of "native unrest" are well revealed in the part played by the colour question in the South African strike-riots which developed into an abortive revolution in March, 1922. The report of the Royal Commission of Inquiry into these disturbances is worthy of a careful study by all who are interested in the Native Problem.¹ A dispute in the gold and coal-mining industries on the Rand led to a stoppage of work on the mines at the beginning of January. Many mines were faced with the alternatives of closing down, or of an extended use of coloured labour. "The Chamber of Mines proposed that certain unskilled work which was being performed by Europeans should be undertaken by natives. This, it was stated, would lead to the prolongation of the lives of many mines, though it would reduce the number of Europeans employed on such mines.

"The Trade Unions stated that this meant 'the substitution

¹ *Report of the Martial Law Inquiry Judicial Commission, 1922.*

of cheap black labour for white', and urged the workers to support them in a policy of 'a white South Africa'. In the Northern Provinces of the Union the prejudice against the black races of South Africa is still extreme. Encroachment by coloured men upon any form of work which has hitherto been performed by Europeans in any industry is jealously safeguarded."¹

It was resolved to form the Trade Unions into "Commandoes", and the "General Strike Committee" proceeded to organize strikers and unemployed Commandoes on a military basis. By March scarcely a township along the Reef was without its Commando. Regular drills under competent instructors were practised. Officers and "generals" were elected and a "general staff" established, and Commandoes gradually armed themselves. As the Commando movement developed, and its revolutionary character became apparent the moderate element among the strikers started to withdraw from it, and the movement was soon controlled by certain sections of the Dutch Afrikaners, and by the Communist element, the latter coming to the fore as leaders.

During the riots, unarmed and defenceless natives, both those employed in the mines or in native compounds and those living in villages along the Reef, such as Sophiatown, occupied by Europeans as well as natives, were repeatedly attacked by strikers and by organized Commandoes, and were shot, "heavy casualties being inflicted upon them."²

The Commissioners report: "The attacks made by the Commandoes upon natives on dates immediately preceding the declaration of Martial Law were calculated, deliberate, and unprovoked. A considerable number of natives were killed and many injured."³

This cry of "a white South Africa" and the bitter race antagonism was employed and skilfully exploited by certain political parties and by the Bolshevik element, who like their Russian colleagues profess themselves "deeply interested in the natives of South Africa". These professed friends of the "oppressed black worker" took every means to intensify racial hostility and to inflame both white workers against black and black workers against white, in the hope that by these means

¹ *Report*, p. 18.

² *Report*, pp. 5, 12.

³ *Ibid.*, p. 12.

they would succeed in wrecking "English Imperialism and the capitalistic system", the dismemberment of the British Empire being looked upon as a necessary pre-requisite in the establishment of international Communist Republics affiliated to Moscow.

This revolutionary element therefore employed themselves in the double rôle of inciting the white workers to attack natives and coloured workers—one of the only three Europeans killed by natives during these disturbances was a "Dutch Afrikaner Member of the Communist Party" who had taken a prominent part in the attack upon the natives of Sophiatown—and at the same time stimulating and encouraging the coloured workers in their resentment against all white government. In their propaganda appeals to the natives the attacks upon them by the white Commandoes and strikers were absurdly represented as being "native pogroms" organized by the Police.

The South African Communist Party, which took the lead in the latter stages of the 1922 outbreak, was affiliated to the Third (Moscow) International, and subscribed to its tenets and policy. At the Congress held in Petrograd and Moscow on 17th July and 7th August, 1920, attended by Messrs. Lenin and Trotsky and other prominent Bolshevist leaders, violent attacks were made by delegates on the treatment of the negroes in the Southern States of America by Europeans and the necessity to free them from servitude, followed by equally violent attacks on England for the treatment of "the enslaved races in Africa and Asia". On this occasion Radek, the well-known Bolshevist leader, stated: "The Communist International must serve as a pillar of fire leading on the rebellious peoples in Asia and Africa."

In furtherance of these projects for the dismemberment of the British Empire, and the establishment of revolutionary communism by the utilization and manipulation of existing racial antagonisms, various practical steps have been taken by the Bolshevist theorists, such as the establishment of an Oriental University at Moscow "in which the negroes of Africa and America are comprehended".¹ This University, according to a delegate of the South African Communist Party (Jones, by name) "will grow into a Grand Mecca of the young militants of the Orient and Africa, there they will fit themselves not merely

¹ *Report*, p. 26.

for the task of revolt, but for the task of Communist reconstruction that is ahead of us all for many years to come."

Special propaganda is addressed to Bantu workers, who, having first been detribalized and prepared by European education and industrialism, are considered ripe for the revolutionary message.¹ Only industrialized natives, who have been divorced by these means from native institutions, occupations, and ideas, are amenable to this type of propaganda. Of course, as the Report points out: "if the European workers on the Rand had realized that the real object of the Communist was to bring about an 'armed uprising' to establish a system which would lead to the complete abolition of the Colour Bar, and was merely a step in the direction of the workers' Revolution to establish a Soviet Republic, it is probable that the South African Communists would have had little or no support."²

The events on the Rand in 1922 serve to show us that the system of native education and the process of industrializing and detribalizing the native races, so often advocated as a hopeful means of allaying "native unrest", is actually, as will be shown more fully later on, the principal means by which native unrest and racial antagonism is developed, and made possible, favouring the hostility of white against black and of black against white, and rendering both easy victims of the revolutionary propagandist. In tropical countries where native and white labour is in no danger of being brought into active competition this cause of racial antagonism is absent, yet there the policy of native education, of attempted Europeanization, produces very similar results.

In India native unrest only became serious in recent years. There is no question, here, of the eradication of native culture. Native culture is highly evolved, complex and resistant, and the tiny population of white colonists is quite incapable of imposing its culture upon the intellectual classes and leaders of thought, either Hindu or Moslem, who are the guardians of the culture-forms of the different races in the country; neither is it able by its influence so to modify the social organization, nor so to revolutionize the living conditions of the people that they are in danger of losing all interests in life and of dying out, like the less highly cultured and more defenceless Polynesians and

¹ Ibid., pp. 28, 30.

² Ibid., p. 31.

Melanesians of the Pacific. Nevertheless, the influence of European rule upon native life is considerable, but, in place of tending to exterminate, it has had the result of greatly enhancing the pressure of population, and at the same time of fostering a growing spirit of discontent. Sir George Birdwood points out that sheer pressure of population aggravated by the reduction, under our benevolent rule, of the virulence of endemic plague and of the frequency of famines, and of such checks to over-population as abortion and infanticide, has contributed to the underlying physiological causes of manifold discontents.¹ More important, however, and less subject to dispute are the psychological factors which now produce the growing discontent of Indian peoples with the conditions of European rule.

These again may be included in that most invariable category, the resentment that arises from attempts to impose incompatible culture-forms. This process is so clearly and succinctly traced by Birdwood that he must be quoted in this connexion. "The direct existing causes of 'the Unrest' are the ever-increasing numbers of . . . Englishmen, both in the service of Government and outside it, who knowing little of the profound spiritual culture of the Hindus and the Muslims, are over-zealous to impose our European culture upon them, not as a supplementary accomplishment, but in supersession of their own traditional learning, literatures, arts, and religions . . . but the most potent exciting cause—in its ubiquity, subtlety, and energy—is the alienation from our rule of the priestly caste of Brahmans, to conciliate whom should be the abiding solicitude, not only of the Government of India, but of every individual Englishman in the country. . . So long as the Hindus hold to their caste system, India will be India ; but from the day they break from it, there will be no more India—India of the Hindus. That glorious peninsula will be degraded to the position of a bitter 'East End' of the Anglo-Saxon Empire.

"Should we proceed further with this Anglicizing programme (as carried out in our system of Public Instruction in India, in the undermining of the religious beliefs of the Hindus and in the destruction of the idiosyncratic handicraft arts of India by the teaching of our English Schools of Art) and, in our ignorance of the true character and aspirations of the Hindus, and meticulous subservience to the home-bred proselytizing

¹ See, by Sir George Birdwood, p. 29.

philanthropists, foist on India any instalments of self-government, after the model of our indigenous methods of 'party government' the end of all things will at once be at hand, alike for the Muslims and Hindus of India, and for the United Kingdom as the tutelary of the Indian Empire" ¹

With a singular lack of penetration and imagination, Englishmen in India address themselves to the task of alleviating the symptoms of a distress of which they appear incapable of diagnosing the causes. With our characteristic and proclaimed regard for the "practical" as opposed to the "theoretical", we interpret the outcome of native modes of thought in terms of our own absorbing interests, and confuse the ills begotten of a spiritual disturbance with their material and physical accompaniments, which alone we choose to regard as important. Even the success that may attend a physician's efforts to relieve the suffering of a patient may aggravate a disease of whose cause he is ignorant; but if he is convinced before he examines his patient that he already possesses the one nostrum that can assuage all ills of the body and another that can cure all ills of the spirit, there is little chance that the patient's condition will ever be efficiently examined. Some such misplaced spirit of confidence must account for our habitual indifference to the tenacity of Hindu and Islamic cultures, as evidenced by our encouragement of the irritant of religious proselytism. Careful authorities agree that the influence of Europeans on Hindu thought and religion has been negligible, though less negligible in modifying social usages. ²

It is easy, however, to understand the bitter hostility of Europeans intent on proselytizing India towards so formidable an institution for the preservation of native religion as the Brahmanical caste system. "All know what a barrier caste is to the advent of Christianity" is a commonplace of missionaries. "The Church will therefore do all she can to help those bands of Hindu reformers who are working for the relaxation of caste rules." ³

The caste system, whatever it may have been when the Aryans first descended into India, so far from being a disintegrative force, as European critics sometimes allege, became

¹ See, pp. xviii, xix, xx, 318.

² See page 44, *infra*.

³ The Rev. H. Pakenham Walsh and others in *Official Report, Pan-Anglican Congress* (1908), sect. II, pp. 117-18.

the most cohesive and permanent force in the whole of Indian history, a force that for two and a half millenniums has withstood countless invasions and all manner of social disruptions. The permanence of the Brahmanical castes was largely due to the fact that they adequately fulfilled the function of preserving the social values of their people as they were expressed in their everyday life. The system was at once the bulwark and most stable institution in Hinduism.¹

At the same time other factors are at work manufacturing malcontents. The development of factory industry in India is slowly and steadily creating a landless and homeless proletariat well prepared to assimilate the revolutionary and subversive doctrines bred of European factory-industrialism, and now systematically propagated by Bolshevik agents, as well as the racial and national antagonism they absorb from their own leaders.

3

The Native Problem in Native Thought

The Native Problem has long been discussed. Slogans and shibboleths have been uttered about it and panaceas have been advocated, but the remedies prescribed have been, for the most part, aggravations of evils of our own creation. Thus we hear recommended: education—*our* education; self-government—on our system of ballot-box election, after we have succeeded in destroying the native system; moral training—on our ideas of morality, after we have destroyed the native morality; medical attention—after we have undermined the native stamina and hardiness. In short, we have studied every possible means of improving the lot of the natives—according to our ideas of what ought a priori to improve them. The only thing we have not thought of studying efficiently is the native himself.

It is as though we were determined to try all means of solving a problem, provided it did not first entail qualifying ourselves for the task of solving it. While the problem itself need never have arisen had the white rulers abstained from quite unnecessary interference, or foregone the gratification of inflicting upon

¹ Cf. Ehot, *op. cit.*, pp. 35-6.

their native subjects their benevolent but mistaken philanthropy. The proof of our failure lies in the most significant and undeniable fact that the Native Problem is most acute and critical precisely in those places where we have had the longest time in which to solve it.

The only way to study the Native Problem is to study native customs ; to discover their importance in relation to the social organization of the people, and thereby discover what is essential to that organization and the communal life of the tribe or race ; to study their beliefs and their morality sympathetically in terms of their own thought, and without the desire to substitute for what is native something that is not native or adapted to native life.

Indifference or hostility to native conceptions of justice or morality is at the root of a great deal of misunderstanding and discontent. When Europeans constitute themselves into Courts for the administration of "justice" among savage tribes, ignorance of the native view-point can only result in native resentment and discontent. An attempt to illustrate this is made in the following personally observed incident, which may be quoted as fairly typical, in British Papua.

Native court cases were being tried before the Resident Magistrate, when the native "Village Constable"¹ brought the parties to the following dispute before the R.M. for decision :—

The disputants belonged to Roro-speaking tribes, patriarchally organized on an exogamic clan basis. They were normally polygamous ; and being patrilocal and patrilineal, all children belonged to the father's clan. A widow would usually, though not invariably, remain in her husband's clan. Although there was no strict levirate, a widow would normally fall to the lot of her deceased husband's brother, or failing him some other member of the clan. On the other hand, there was no bar to her marrying into a different clan again, provided it was not her father's clan ; but if she left her late husband's clan it would expect to be repaid the greater part of her original purchase price, in the form of pigs, armshells, etc. In addition to this, the woman's own clan (her father's) would require recognition of the same kind. This meant that to comply with native obligations, a man marrying a woman out of her late husband's

¹ A native resident in each village is chosen to act as the Government's representative and given the title of "Village Constable".

clan would find himself under an obligation to return the customary bride price to two sets of interested parties instead of one. This fact alone might account for its comparative infrequency. The children of the first marriage would as a matter of course remain with their own (i.e. their deceased father's) clan. Unweaned children, were, for obvious reasons, the only exception.

In the present dispute a woman, recently widowed, had just become the second (polygynous) wife of a man belonging to a different clan to her late husband's. She had taken with her her two younger sons, the youngest had barely been weaned. The brothers of her late husband were demanding the return of the elder boy to his clan, but were apparently willing to waive (for the time being, at any rate) their claim to the younger. The matter would, it appeared, have been arranged on that basis, and a clan quarrel avoided, had it not been for the interference at this stage of a native mission-teacher, who heard of the matter and reported it to the nearest Mission station. The Missionary took the view that the woman, having entered into a polygamous union, and therefore having, from his point of view, committed a deadly sin, should on no account be allowed to retain *any* of her children, even the youngest one. The Missionary, accordingly, recorded his views to that effect, and sent his deposition and recommendations to the Resident Magistrate. All parties, including the Missionary's delegate, were now present before the Resident Magistrate. This official, who had not been very long in that district, and consequently knew very little about the native customs there, in spite of many years' service in the country, took the view that, since native marriages according to native custom should be recognized, it was wrong, contrary to the Missionary's view, to penalize the woman by depriving her of her children; but since a widow on remarrying should, by analogy with English customs on similar occasions, take with her *all* her children she was clearly entitled in this case to have *all* her children restored to her, which as it happened included *two further children* in addition to the two in dispute. Judgment was given accordingly, to the surprise and evident dissatisfaction of *all* the parties concerned.

Here indeed was an example of white man's justice! Two different white men took exactly opposite views about *what* was justice between natives, whose own customs and wishes they

were either ignorant of, or ignored, and the ideas of both white men were equally irrelevant to the case, from the natives' point of view.

The R.M. confessed to me afterwards that had he been more conversant with the native customs his judgment would have been different. In the Missionary view, however, knowledge of native custom could not, presumably, have affected an opinion based on knowledge of "absolute" morality.

IV

THE DECLINE OF SUBJECT RACES: GENERAL CONSIDERATIONS

I

Overpopulation and Depopulation

WE have seen that the phenomenon of a rapid decrease in native populations, as soon as they are brought under the sway of more civilized or more powerful people, is only one of two contrary tendencies which are likely to signal the meeting of two dissimilar and incompatible cultures. Where the native population is vast in proportion to the immigrant conquerors and the native culture highly evolved and capable of meeting the immigrant proselytism on terms of intellectual equality, as for instance in India, depopulation does not occur. On the contrary overpopulation is likely to occur.

There exists a difference of opinion as to whether overpopulation exists in India or not, and the question is hard to decide owing to the difficulty of arriving at a satisfactory standard by which overpopulation may be judged to have occurred. Although the test is put forward with great ability by a recent writer,¹ there are objections to accepting as evidence of over or under-population any data which indicates whether the real income per head is increasing or not with the increase of population. Such a standard cannot be completely satisfactory to the sociologist, who does not equate social or individual well-being or happiness with increase or decrease of income per head. It may happen, and does often happen, that an increase in the pressure of population, by aggravating the evil consequence of social disintegration and of over congestion, may bring about an increase of misery and social discontent (more legitimately measurable by other indices, such as variations in the rates of suicide, of criminality, of divorce, of industrial disputes, of

¹ Carr-Saunders, *op. cit.*, p. 275.

insanity, of the incidence of disease, of riots, of social and political commotions), while at the same time the real income per head for a long subsequent period shows no indication of any corresponding decrease, but may, on the contrary, show an increase.

In such circumstances we may feel entitled to speak of over-population, while Mr. Carr-Saunders and those whose one index of over-population is decrease in the real income per head would be inclined to deny its existence. It is true that in the same work this author qualifies his position by the observation that the economic criterion founded on the average income per head need not be the only test whereby the desirable number might be ascertained. "It may also be observed that the remarkable differences in the return per head as between different countries are in any case very largely due to the amount of skill employed and not to the nearness of approximation to the desirable number."¹ The fact is that real income per head, so closely dependent on the extent and progress of industrialism (including the industrialization of women), is no indication, except perhaps in inverse ratio, of real well-being, nor of the absence of misery caused by over-crowding and social disintegration. Examples might be cited, even among civilized people, of relative social well-being and no calculable income per head at all. We might cite, for instance, the pioneer settlers in the North Island of New Zealand in the forties and fifties, men starting with little or no capital who made their homesteads in forest country they had cleared, living on what they grew themselves, using primitive and home-made implements, selling nothing, since for years no market existed in which they could sell their produce.² Many of these men brought up families, and lived tolerably happy and contented lives for years altogether without wages or income. On the other hand, in highly industrialized and densely populated countries as in England, an ever-increasing proportion of the population is wholly or partly State-subsidized (i.e. wholly through the Poor Laws, Unemployment Doles, Asylums for the Insane

¹ Op. cit., pp. 309-12.

² After the annexation of New Zealand to the Crown in 1840, colonists sent out by the New Zealand Company started to settle in the Wellington, Wanganui, New Plymouth, and Nelson districts. It was not until the discovery of gold near Otago in 1861 that a new stage in the economic development of the colony was inaugurated. Cf. article by J. Henderson in the *New Zealand Journal of Science and Technology*, vol. v, No. 5, "A Sketch of the Economic Development of New Zealand."

and Mentally Deficient ; or partly through State Insurances, Old Age Pensions, free State Education, Poor Law Relief, Motherhood Endowment, free Public Health Institutions, etc.).¹ Socialistic legislation, in the form of a continually increasing subsidization of all who subsist wholly or partly on State institutions, fosters the increase of the poorest strata of society and of those in all classes who renounce all attempt to maintain, by their own exertions, a standard of life, while the numbers in the independent, industrious, and healthy classes, who derive little or no benefit from these institutions although they pay the great bulk of the taxation raised to meet this increasing burden, are correspondingly decreasing. But the comparative income per head of the different social and occupational groups does not correspond to their respective ratio of increase or decrease, nor to their relative freedom from economic pressure, since the higher social groups or classes showing the larger income per head are the first to feel the pressure of over-population, while the lower the class in the economic and social scale the less are they affected by the pressure of population in the direction of decreasing their numbers. The classes upon which economic pressure bears most heavily are seen to be those who struggle to maintain their former social standard, for their relatively higher income is to a greater extent absorbed in paying high rates for services, such as education and health, which makes no encroaches upon the incomes of the partially subsidized classes, who receive these as free services from the State. The former classes (i.e. the professional classes and the landed gentry), faced with the increasing burden of taxation and the overcrowding of the professions and of those occupations for which their traditions, training, and abilities dispose them, are forced either to restrict their numbers relatively to the increase of the classes they themselves partly support through taxation (it amounts to the same thing whether their numbers are restricted in the first place by limitation of families, or subsequently by inducing a proportion of their numbers to migrate to colonies)

¹ A Parliamentary Return, in 1920, popularly known as the Drage return, showed that the expenditure in England in subsidizing the non-self-supporting, under such headings as Insurance, Pensions, Reformatory and Industrial Schools, Inebriates, Education, Unemployment, Mental Deficiency, and Public Health, rose from a little over 20,000,000 in 1891 to over 103,000,000 in 1918. By 1925, the Civil Service expenditure had risen to £222,600,000, while according to figures produced by Sir Alfred Mond, about one-tenth of the whole population was dependent upon unemployment benefit, poor-law relief or charity for their sustenance.

or by the hardest of all expedients, the abandonment of all attempt to maintain themselves within their former social group. From these instances we see that a relatively higher average nominal income per head is compatible with an increasing pressure of population which will affect more adversely those above rather than those below the national minimum standard of life.¹

Further digression into the region of economic problems would lead us too far astray from our main theme. We shall, therefore, confine ourselves to distinguishing between the instances where progressive decrease of population, which when continuous is termed depopulation, undoubtedly occurs, and where it certainly does not occur, without attempting to define either over-population or under-population.

In India, as already noted, the opposite of depopulation is occurring. Whether it amounts to over-population or not does not much matter for our present purpose. It is interesting, however, to note that Carr-Saunders not only believes that over-population occurs in many parts of India,² but assigns as responsible for it very similar causes to those (as we shall see) which are also responsible in different circumstances for the opposite tendency, for the depopulation of subject races.³ "European influence," writes Carr-Saunders, "may have had an ill effect. The lessening of elimination through disease and war does not of necessity in itself tend to bring about any over-population. On the contrary, it tends rather to remove the causes which produce degraded social conditions and the consequences which flow from them. But in other ways European influence is not beneficial. Those customs, for instance, which insist upon the bridegroom possessing a certain degree of skill

¹ Expert opinion is not always so loth to pronounce England to be grossly overpopulated. Recently a biologist and an agricultural authority does not hesitate to affirm (on the grounds that Great Britain, with a maximum effort under the stimulus of the war in 1918, which produced the largest wheat crop since the record crop of 1882, filled only 30 per cent. of requirements) that "the really frightful overpopulation of England and Wales stands out as a striking fact." East, *Mankind at the Crossroads*, pp. 79, 80.

² Op. cit., p. 276.

³ Professor East also arrives at the conclusion that India is over-populated and has reached a point where it is impossible for her to increase rapidly by an excess of births over deaths. He points out that "conditions must be pretty bad where an annual birth-rate ranging from 40 to 55 per thousand of the population is so nearly equalled by the death-rate that the annual increase is only a shade over 10 per thousand." The population of India has increased from 178 millions in 1851 to 315 millions in 1901, but during the last decade the increase was less than 4,000,000 or 1.2 per cent. Op. cit., pp. 89-90.

break down, and, unless a more or less distinctly formulated ambition takes their place, there is nothing to ensure that the necessary effort to secure the highest standard of living that is possible will be made. That which is common to these races, where over-population is suspected, is the absence of hope and fear alike, of ambition and of a standard of living; they are content to subsist on what will just support life. Such conditions are fatal to the attainment of the desirable number. Abortion and infanticide may still be practised, but as a rule only in the presence of absolute need, not as regular customs before the need arises. To the bringing about of these conditions the factors mentioned above contribute, but they probably never represent the whole cause. In these cases we seem always to find that political misfortunes have overtaken these peoples. They have suffered from oppression in one form or another and gradually the old customs have been lost; hope and ambition have faded from the outlook. In consequence of oppression the mass of the people has by degrees sunk to a degraded condition in which neither the former customs are practised nor is an individual effort, as a rule, made towards the attainment of the best which the skilled methods available, surroundings, and so on, make possible."¹

It appears, then, that under certain circumstances when a people fall under the domination of an alien race, which seeks to impose upon it incompatible culture-forms, over-population, or at any rate, a rapid increase of population, is likely to occur, partly as the result of the breakdown of native customs, which formerly regulated numbers, and partly by inducing a feeling of general discontent or of apathy, or by fostering a condition of social disorganization resulting from interference with, or modification of, native cultural elements. But, as we shall have further reasons for believing at a later stage, it is also in the breakdown of native customs and the suppression of the native culture by the attempted imposition of incompatible culture-forms that we find the principal causes of the depopulation and gradual extinction of many of the races subjected to European government. At first sight it may not appear consistent to attribute exactly opposite results, both depopulation and over-population, to the same group of primary causes.

¹ *Op. cit.*, pp. 276-7; compare also this analysis with the opinion quoted on p. 28 of the same work.

We may, however, at this stage provisionally distinguish the group of circumstances in which the culture-clash fosters increasing population or over-population and the group in which it tends to bring about depopulation or a decline of population. Perhaps the most conspicuous difference between the culture-clash in India and Indonesia with their teeming populations and the culture-clash in the depopulated islands of Oceania or as applied to the aborigines of Australia and Tasmania, lies in the capacity shown by the Hindu and Moslem cultures to resist the European proselytism which they despise, and to preserve almost intact their traditional cultural values, however drastically their economic and political evolution may have suffered modification, whilst the barbarian cultures of Oceania and Australasia, conscious of their cultural and intellectual inferiority, have been powerless to preserve the essential elements of their cultures against proselytism. All authorities agree in acknowledging the insensibility of Hindu thought and religion to European influence, although social usages are less immune. Thus Sir Charles Eliot writes: "The small effect of European religion on Hinduism is remarkable. Islam, though aggressively hostile, yet fused with it in some sects, for instance, the Sikhs, but such fusions of Indian religion and Christianity are microscopic curiosities. European free thought and Deism have not fared better, for the Brahmo Samaj which was founded under their inspiration has (in 1911) only 5,504 adherents. In social life there has been some change: caste restrictions, though not abolished, are evaded by ingenious subterfuges and there is a growing feeling against child-marriage." And he goes on to say, "The last half-century has witnessed a remarkable revival of Hinduism."¹ The attempts at Europeanization, to the extent in which they have met a successful resistance, have, as an inevitable consequence, produced, and been the measure of, the "unrest" that distinguishes the native problem in those countries, whilst the impotence of the more lowly and barbarian cultures to make an effective resistance has left the natives ill-equipped, and without the will, to survive the destruction of all the values that gave meaning and zest to their lives. The same forces that have in the first instance only succeeded in modifying and hampering the normal expression of native culture-forms at the cost of social disintegration have

¹ *Hinduism and Buddhism*, pp. xlvii, xlviii.

in the other led to the extirpation of native culture-forms, with the consequence that the natives have failed altogether to adapt themselves. The evidence for the correctness of this explanation must be left over until detailed illustrations are given. Another factor that has aided the subject races of higher culture in their resistance to all attempts at Europeanization has been their overwhelming numbers in proportion to their European invaders, who have failed to colonize and increase rapidly in a climate to which they are not innately adapted.

This explanation, it is true, does not apply to every country where the clash of culture occurs between ruling and subjugated races. For instance, the Bantu is a lowly and barbarian culture ill-equipped to resist Europeanism, while the climate of South Africa in this instance is suitable for European colonization, yet the Bantu races are not dying out. Again, the negro is far from dying out in North America, although the North American Indian is left behind in the race by both black man and white.

According to the view that I am now presenting these contrasts in the effects of the culture-clash all depend upon the adjustment of widely differing external and internal factors.¹ Such factors are: (1) Variations in the relative power of the dominant culture in influencing the normal living conditions to which the natives are adapted. This factor varies according to the extent of effective interference and control exercised. (2) Variations in innate amenability or adaptability of the subjugated races. This factor is equally as variable as psychological types. The grounds for supposing that distinct fundamental differences in psychological type exist will need separate discussion. (3) Modification and transformation of innate qualities of subject races by the infiltration of alien blood. The influence of race-mixture also receives treatment under separate headings.

2

Why do Natives Die out? The Alleged Causes of Decline Classified

Slow-breeding man has been known to double his population in twenty-five years, and it has been reckoned, wrote Darwin, that this might occur under the most favourable conditions in a little over twelve years, but if this rate of increase

¹ Cf. also Pitt-Rivers, "The Effect on Native Races of Contact with European Civilization," *Man*, 1927, No. 2, on effects of the contact of two dissimilar but interacting culture-trends.

were maintained for a thousand years there would in less than that period not be standing room in the world for the progeny of a single pair.¹

Human fecundity or the capacity for natural increase is normally so much greater than the greatest possible fertility compatible with the available means of subsistence that in all populations—except those that are dying out—any increase in the factors of elimination tend to be compensated for by an increased fertility, which is still far below the rate that fecundity makes possible.

It is too often assumed that the decline and disappearance of a population is wholly due to the operation of new or of old factors of elimination. When a decline in population is observed any new factors or any factors that have been and are still operating as checks to population are immediately cited as sufficient cause to account for the decline, without pausing to consider why fertility—always so far behind fecundity—can no longer keep level with the factors of elimination. When, as sometimes happens, a population declines and at the same time many of the old factors of elimination are removed, as when the Maori population was observed to be declining during the last three decades of the nineteenth century, although warfare had ceased to be a factor of elimination and food was more abundant than ever before,² the most contradictory and diverse causes are often arbitrarily cited by baffled investigators to account for a phenomenon they cannot explain.

Although it is well known that a high mortality rate is the normal accompaniment of a high birth-rate, and a low death-rate the normal accompaniment of a low birth-rate, exclusive importance is often attached to the factors and the rate of elimination while ignoring the relation of one to the other, as well as neglecting to discover the underlying root causes determining the adaptability or inadaptability of a population to changes and influences, both physical and psychological, in their environment, and forgetting that the factors of elimination, whether many or few, are the agents whereby the fundamental tendency in adaptation is able to express itself. Where there is adaptation the elimination rate meets requirements by maintaining the population at its "optimum density", where there is failure in adaptation

¹ Darwin, *Descent of Man*, p. 66; *Origin of Species*, p. 47.

² See *ante*, p. 22.

elimination may exceed, and fertility fail to meet, requirements, and a progressive decline will be witnessed.

In Chapter II we considered some of the evidence of depopulation in certain regions inhabited by backward races and found there were reasons which force us to suppose that the phenomenon of a rapid decline of native populations coincided with the subjection of these races to the control and cultural influences of Europeans. We were led to believe, too, that since there is no evidence of any extensive or appreciable decline before the arrival of Europeans, these two sets of facts are causally related. We shall now have to summarize very briefly some of the causes most frequently brought forward to account for the observed decline, and, so far as possible, distinguish between those that together may be contributory to the decline and those that can more certainly not be held responsible.

An examination of causes alleged by different observers to be responsible for a decrease of population particularly in Melanesia and Polynesia will show that all alleged causes can be placed in one or the other of two groups. In one group the causes of decline are attributed to the influence of contact with Europeans, and in the other group the causes are not attributed to European contact, but are held to be independent of it and inherent in the native culture and life. Clearly both groups cannot be held to be responsible. If any of the alleged causes in one group are tenable, their opposites in the other group must be rejected. Similarly, if considered collectively, the acceptance of one group of causes involves the rejection of the other. Frequently the influence of some factor is on the one hand alleged to be a cause of decline, while on the other the same influence is alleged to have been beneficial and its disappearance is said to have contributed to, or to have been the sole cause of, the decline. Many of the headings denoting alleged causes of racial decline are taken from the "Report of the Commission appointed to inquire into the Decrease of the Native Population (Fiji)" of 1896, where these may be held to have a general applicability, supplemented by other and more recent reports on this subject relating to different populations. No attempt is, nor could be, made to refer to more than some of the more important or representative discussions of this problem.

In the following table, I have placed against each other a series of mutually exclusive alleged causes, attributed, under

column 1, to the influence of Europeans, and under column 2, to the influence of pre-European native customs. Thus if No. 4, "introduction of European foodstuffs," is harmful, the continued use of native foodstuffs cannot also be blamed. If Nos. 11 and 12, "Abolition of native warfare and head-hunting," has deprived the natives of their chief interests in life, as Dr. Rivers suggested, and thereby contributed to the despondency which has been a factor in native decline, it is inconsistent to blame native warfare and head-hunting as being responsible for the same ill effects.

**ALLEGED DELETERIOUS INFLUENCES AND CAUSES OF
DEPOPULATION AND RACIAL DEGENERACY**

1. Attributed to influence of, and contact with, Europeans.	2. Held to be unconnected with advent of Europeans, but inherent in the native life and culture.
1. Changed habitat	Insanitary native dwellings and domestic habits.
2. Concentration of houses and villages	Decentralization.
3. European clothing	
4. Unsuitability of European food .	Quality and supply of native food and drinking water.
5. Recruiting system, and segregation of sexes on plantations	
6. Abolition of native communal system and authority of chiefs	Native communal system and power of chiefs.
7. Alcohol	Native narcotics (Kava drinking, betel chewing, etc.).
8. Introduced diseases, endemic and epidemic	Native endemic diseases, and diseases of children tending to permanently injure health.
9. Obstacles to marriage and female postponement of marriage, due to European control or interference	Obstacles to marriage in native marriage customs, and child marriages.
10. Influence of penal laws against fornication (where enforced, as in Fiji)	Sexual depravity inherent in native life and customs.
11. Abolition of native warfare . . .	Native warfare.
12. Abolition of head-hunting . . .	Head-hunting.
13.	Infanticide, abortion, and prevention of conception.
14. Increase of infant mortality under new conditions	Infant mortality as result of native customs, unskilled midwifery, work during pregnancy, etc.
15. Abolition of polygamy	Polygamy and condition of women.
16.	Consanguineous marriages and in-breeding.
17. Psychological causes, including general insouciance of the native mind, and growing disinclination to bear children	

The remedies proposed at different times to alleviate or cure the decrease or degeneracy of the people may similarly be classified according to whichever view is taken of the causes of decrease. If the effective causes are primarily due to conscious or unconscious influence or interference on the part of Europeans, the remedies must logically lie in removing those influences or in counteracting them; if, however, they are inherent in the native life and system a remedy may then be found in bringing a still greater influence and a more effective interference to bear on the natives.

A survey of the more important reports and of the recognized literature on the subject shows a curiously persistent tendency to lay the weight of responsibility for the decline on elements inherent in the native culture. Thus Sir Hubert Murray, Lieutenant-Governor of Papua, in his Review of the Australian Administration in Papua from 1907 to 1920,¹ after expressing the opinion that the original tendency to diminution had spent its force so far as the territory under his administration as a whole was concerned, speaks of "other tribes", mentioning as examples the people between Fly and the Pahoturi, "who, apparently, must disappear before long, and when one considers their habits, the only cause of surprise is that they should ever have come into existence at all." Definite mention is made only of child-marriages and "the probability of unnatural offences and other filthy customs". He then continues, "People of this kind must die out in any case, whether white men come or not, and their existence shows how the problem is complicated by the absolute lack of evidence whether the population was increasing or decreasing before we came to Papua. It is difficult to imagine that people with such habits as those mentioned should ever increase." Were it not for the prevalence of this view, which is likely to remain attractive if for no other reason than because it seeks to exculpate European civilization from a charge of exerting a lethal influence, it might be unnecessary to labour the point that there is no necessity for people who practise child marriages, even coupled with "the probability of unnatural offences and other filthy customs", to die out in any case; and whether it be difficult or not to "imagine that people with such habits should ever increase", it remains a fact that child-marriage together with innumerable habits strongly distasteful to European

¹ pp. 28 et seq.

sentiments have prevailed among people over a very wide region, including India, who have yet shown remarkable powers to increase.

Furthermore, the reference to the "absolute lack of evidence whether the population was increasing or decreasing before we came to Papua" is quite unjustified in view of the considerable body of evidence—(to which reference has been made in Chapter II)—pointing to the maintenance of the populations of Melanesia and of other regions at their optimum density previous to the European influx, and of the universality of the various checks which were brought into operation in order to achieve this result. There is, in fact, only an absolute lack of evidence of any previous general *decrease*. The burden of proof is therefore on those who imply that there was any such previous general decrease sufficient to account for the extinction of races witnessed after the European coming, this proof the defenders of the "innate-native-degeneracy" theory are quite unable to produce.

In view of this very common bias in favour of the belief in the innocuousness, or more generally the positive benefits, that European civilization and culture brings to backward or primitive races, it is perhaps only to be expected that the overwhelming preponderance of remedies proposed are, as a consequence of this bias, directed towards increasing the means and methods of controlling and further influencing and modifying native living conditions, their ideas, customs, mental life, and material environment.

The following list includes all the more frequently proposed, though by no means all generally agreed upon, remedies.¹

1. Institution of hygienic and medical missions.
2. Establishment of hospitals, clinics, and crèches.
3. Greater control by white officials, and the appointment of a greater number of officials.
4. Institution of inquests on infantile deaths.
5. Circulation of instructions in nursing, hygiene, etc.
6. Improvement in the dietary of infants.

¹ This list is compiled from a variety of sources, preference being given to the more official pronouncements. Reference is invited particularly to the following compilations and reports selected as representative of authoritative British opinion during the past fifty years: the Commission's *Report on Native Customs in Cape Colony*, 1882; *The Fijians*, by Sir Basil Thomson, 1890; *Report of Commission on Decrease of Native Population (Fiji)*, 1896; *Essays on Depopulation of Melanesia*, 1922; *Report to the League of Nations on the Administration of New Guinea*, 1923; *Proceedings of the Anthropology and Hygiene Sections Pan-Pacific Science Congress*, Melbourne, 1923; *Annual Reports, Administration of Papua*.

7. Institution of rewards for large families.
8. Encouragement of miscegenation.
9. Suppression of polygamy.
10. Improvement of the condition of women.
11. Greater attention to food production.
12. Change of, and improvement in, the food staple.
13. Education and moral training; and encouragement of missionary enterprise.
14. Inculcation of European habits of work and industry.
15. Subversion of the communal system.
16. Curtailment of the power and authority of chiefs or the employment of European officers instead of native chiefs.
17. More effective deterrents against abortion.
18. Restraint of the prevalent "immorality".
19. Concentration of villages.
20. Establishment of model villages.
21. Elective legislature.

The above measures are directed exclusively towards increasing the effective influence and interference of European officials, toward further undermining and extinguishing the essential elements of native culture and the native *modus vivendi*, and towards forcing all elements of native culture to conform, so far as possible, with the standards of modern industrial civilization, which apparently, and rather curiously, are tacitly assumed to have so nearly reached perfection as regards physical and mental well-being, eugenic standards, moral standards, standards of order and government, and religious enlightenment, that in all these things they are fit to stand to the natives as models, in substitution of their own.

In a few minor directions, however, measures, designed to mitigate European influence and interference, are sometimes advocated. These proposals take a somewhat different form according to the class of European who puts them forward. Thus missionaries, regarding themselves the natives' protectors, frequently urge that while they should be accorded greater powers of control over the native, natives need protection from the rapacity of traders, planters, and recruiters, and from excessive government interference. Government officials who not unnaturally tend to see a solution in the multiplication of administrative, disciplinary, sanitary, and clinical measures, frequently point to the evils of excessive missionary interference and of unrestrained exploitation at the hands of traders and planters; while the commercial classes generally depreciate both excessive Government and excessive missionary interference.

The following measures designed to counteract European influences are often put forward :—

22. The sale of all intoxicating liquors should be forbidden, and offenders severely punished. (Especially applicable to New Hebrides.)
23. Recruiting should be properly regulated and at times, in certain areas, prohibited.
24. Sumptuary laws restricting the use of European clothes. (Sumptuary laws in the opposite direction enforcing the wearing of clothes have from time to time been made, as in New Guinea—Native Ordinance, 1920 ; New Hebrides and elsewhere.)
25. Relaxation of the laws against fornication and adultery. (Fijian Report of 1896.)

We have already remarked that neither a high nor a low rate of mortality is any indication of the tendency of a population to increase, remain stable, or decrease, except in relation to the birth-rate. When, however, fertility fails to compensate the rate of elimination, the population must decline whatever the factors of elimination, and whether the rate of elimination is high or low. When, therefore, a seriatim examination of the causes of decrease is undertaken it is illogical to maintain that decrease is due wholly to diminishing fertility or wholly to an increasing mortality. Investigators, however, are apt to lay exclusive emphasis on either the one or the other and to think that any variation in either is a sufficient analysis of the cause of decline. In Melanesia, responsibility has at different times been placed sometimes on a low birth-rate and sometimes on a high death-rate. Thus according to the Report on the Fijian Decrease "the fecundity of native women as evidenced by the birth-rate is satisfactory, except in certain provinces,"¹ and the decrease was attributed not to sterility but to infant mortality, caused by "constitutional atony" of the mothers, the maternal debility being attributable to their malnutrition, disease, and over-frequent gestation. In other parts of Melanesia, however, Dr. Rivers, basing his conclusions on native genealogical records obtained during his investigations in the Torres Straits twenty-six years ago, claims that his investigations "showed conclusively that the fall in numbers is due quite as much to decrease of the birth-rate as to increase of the death-rate."²

A more recent report on the native population of northern New Ireland showed that no excessive infant mortality could be observed in that region to account for the considerable recent decrease which was attributed chiefly to the low birth-rate. The report referred to was made by Dr. Hoffmann for the German

¹ Op. cit., p. 127.

² *Essays on Depopulation*, p. 97.

Government in 1913¹; according to this report the death-rate among children was no greater than in Germany. It is a point of interest in reference to the subject of sex ratio, which is discussed fully later, that Dr. Hoffmann considered that the recruiting system was largely responsible for this low birth-rate, 33 per cent of the young men in their best years being taken for varying lengthy periods from their villages. No figures are recorded of the number of women recruited, but the number of women recruited is everywhere very much smaller than the number of men.² In spite of this drain on the manhood, a deficiency of women, that invariable accompaniment of a declining population, was observed, there were also more boys than girls.

Once more, then, the investigator must be reminded that the mere enumeration of new or of old factors of elimination, even when an increase in these factors and in their effectiveness can be established, does nothing towards accounting for the root cause of the continuous decline and disappearance of a race, however much laborious analysis it may be thought to avoid, or however convenient or attractive it may be to attribute all responsibility to such checks to population that are readily apparent. Checks to population and factors of elimination are necessarily in operation in all populations, and their incidence bears no invariable relation to the increase or decrease of populations. Bearing these facts in mind, therefore, we are not impressed when we are told with comfortable assurance that, in the words of Sir Sydney, now Lord, Olivier, "there is no mysterious law of Nature which causes native races to die out before the white man. The causes of the extinction of native races are only a mystery at a distance. On the spot they are easily recognizable as violence and starvation, and civilized drink and diseases."³ Whether laws of Nature are mysterious or not would presumably depend upon the extent to which they are properly understood, but we must have grave doubts whether

¹ *Amisblatt*, 1913, pp. 114-31, see also references to this report in *Report to the League of Nations on the Administration of New Guinea* (1923), § 158.

² See Ch. V, 5.

In the British Possessions none except married women accompanying their husbands may be recruited, or, in special circumstances, single women for domestic work. In German New Guinea there were but 1,400 women recruited to a labour force of 20,000 "boys"—that is about 7 per cent. Murray, *op. cit.*, p. 12; and *Report on New Guinea*, 1921-2, p. 55.

³ Quoted by Murray, *Review of Australian Administration in Papua*, p. 31.

the authors of such facile and meaningless generalizations as the one quoted have ever understood or even efficiently studied the problem, either at a distance and extensively or on the spot and intensively. Such generalizations are, of course, very plausible, especially to those without special study of the problem, the truth boldly stated may sound much less plausible. It is none the less far truer to affirm that "no native races have been extinguished by violence, starvation, and civilized drink and diseases, whatever the extent to which their numbers may have been reduced by these means". This applies at any rate to the native races in the Oceanic regions, and to their extinction at the hands of Europeans. The more the actual conditions are studied the more significant become the facts which relate to races and population who have at times increased enormously under periodical conditions of starvation, famine, and drought, in spite of continuous internecine warfare and head-hunting, or notwithstanding civilized drink and diseases, while at other times races have exhibited a progressive decline after a precarious and barely sufficient food supply has been replaced by an assured abundance, and continual fighting by an undisturbed peace, as among the aborigines of Australia and, formerly, the Maoris of New Zealand, and when alcohol has been prohibited and diseases checked. Instances may be quoted of native races reduced in numbers by violence and subsequently disappearing, but their actual disappearance has been due to causes other than the elimination by violence. For instance, no native race suffered to a greater extent than the Tasmanians from the violence of European colonists. Their numbers originally estimated at not less than 7,000 were in a short time reduced by fighting with the English.¹ Finally an organized drive of natives, after the manner employed to exterminate dingoes in Australia, further reduced their numbers to 120 individuals, who delivered themselves up. Henceforward there was no further elimination by violence. The survivors were transported to Flinders Island in 1882, and subsequently back to the mainland fifteen years later, and apparently well treated. The island was healthy and there was no lack of food. The number of healthy men and women remaining was amply sufficient to breed and to

¹ Cf. Darwin, *Descent of Man*, p. 284, quoting Boniwick's *Last of the Tasmanians*.

increase the population in a very short time to the limits that the island would hold, yet instead of thriving under these new conditions they proceeded to die out with extraordinary rapidity, both on Flinders Island and afterwards when they had been returned to the mainland, until in 1864 only three elderly women and a man survived. The infertility of the women was even more marked and remarkable than the elimination by disease. "At the time when only nine women were left at Oyster Cove, they told Mr. Bonwick that only two had ever borne children."¹

The insufficiency of the various causes usually assigned to explain decrease, including the most frequent explanation, new diseases, was well realized by Darwin.² The inadequacy of this explanation, both when applied to particular instances and with reference to general principles, forms one of the themes of this work. Before proceeding to a brief seriatim examination of the more important alleged causes, it is sufficient here to point out, once more, that neither the incidence nor the mortality of diseases whether endemic or epidemic are any indication of the growth or decline tendencies in a population. The incidence of endemic diseases is invariably far higher among civilized and dense populations than among savages.³ Epidemic diseases, especially when newly introduced, sometimes sweep away a large proportion of the population, but if the settled tendency of the population is to increase rather than decrease, the survivors, unless entirely new factors supervene, must continue the upward trend at the same rate of increase. In 1665 bubonic plague accounted within five months for the death of nearly 70,000 people in London, about a fifth of the total population, yet after this grave loss the population did not continue to decline, on the contrary it continued in the course of time to increase far beyond its numbers before it was swept and reduced by "The Plague". When, however, a race is already disappearing, epidemics must have the result of hastening its final extinction.

¹ Ibid., p. 285.

² Ibid., p. 278.

³ In this connexion see Carr-Saunders' discussion of the history of lethal disease in its relation to population, *op. cit.*, pp. 158, 215, 246.

V

THE DECLINE OF SUBJECT RACES: CONCRETE CAUSES DISCUSSED

I

Changed Habitat : or Insanitary Native Dwellings and Domestic Habits

AMONG the causes of decrease charged to insanitary native habits prominence is often given to the following :—

(a) The burial of bodies in the villages.¹

(b) Keeping of pigs, "which are invariably diseased and attract flies that spread infection while their proximity to the sleeping places of the people accounts for the prevalence of internal parasites among young children." ²

(c) The custom of not raising the houses above the ground, and the lack of drainage allowing pools of water to collect. It was stated that in Fiji it was the privilege of chiefs only to raise their houses above the ground. Some suggest that this custom of sleeping and living in close proximity to damp soil and the breeding ground of mosquitoes aggravates and increases malaria.

(d) Native houses are alleged to be overcrowded and badly ventilated, while the custom of burning fires in their houses and the resulting smoke vitiates the air and prejudices the life and health of the children born under such conditions.

(e) The habit of burial in the villages, under the houses or near the water supply. The prevalence of insanitary burial customs is reported from innumerable sources all over Melanesia.

(f) While the insanitary habits and dwellings of natives generally referred to are acknowledged to have been in operation for an indefinitely long period previous to the European invasion, certain changes alleged to be lethal are in some instances directly

¹ Ref. e.g. *Dispatch of Acting Governor of Fiji to Colonial Secretary dated 19th September, 1894, No. 20.*

² *Report Fiji, p. 82.*

attributable to European influence. Examples are the changed habitat of the Maoris, who previously built their *pas* on hill-tops, but after the introduction of fire-arms took to living in low-lying swamps¹ Some writers, viewing the subject more extensively, while admitting the insanitary condition of many villages, point out, with truth, "that the inhabitants of villages placed on healthy sites, with good running-water and natural drainage, have decreased at the same rate as those built on swampy ground."²

Whatever the varied conditions of native sanitation among the different Pacific races before the European advent, the populations must have been well adapted to survive in them. Neither are there sufficient grounds for supposing that, even judged by European standards, they were necessarily inferior to the sanitary conditions in European cities. Among the Polynesians generally, there is reason to suppose they were actually very much superior. For instance, "Cook noticed that most Maori *pas* were better regulated than many of the large cities of Europe at that date, every little cluster of houses being furnished with a privy (*poepœ*), the offal of their food was piled up in regular dunghills."³ By ancient Maori custom no cooked food could be taken into a dwelling house nor eaten there.

2

Concentration of Villages ; or Decentralization

It is acknowledged that the tendency of the native races of barbaric cultures is towards decentralization. From time immemorial their social organization has been adapted to village life. When village settlements become too large, clan units detach themselves and form new settlements. The tendency in the direction of the concentration of villages and the growth of large towns takes place only under the influence of European encouragement and control. European opinion is almost invariably in favour of concentration for the following reasons. Concentration into large village settlements and towns facilitates

¹ Newman, *Trans. N. Z. Inst.*, vol. xiv ; and Stevenson, *In the South Seas* (pop. ed., 1920), p. 39.

² *Report Fiji*, p. 82.

³ Hamilton, *Maori Art*, p. 75.

the constant supervision and control of natives by white officials and missionaries. The careful selection of sites by white officials, who subsequently decide the lay-out of the towns, the type of houses, and the method of their construction, and institute a system of constant inspection, is the ideal usually aimed at. This is only rendered possible by greater concentration, which also facilitates a greater increase of educational facilities and the means to obtain what is called "the natives' physical and moral advancement".¹ Concentration is also advocated because it tends to encourage a wider selection in marriage and therefore to counteract the supposed evils of in-breeding. (This subject is considered under a separate head.) Finally concentration is encouraged as a means to inculcate individualism and to undermine the native communism.² The only comment that need be made here is by general reference to the conclusion that our diagnosis leads us to. This conclusion has forced us to distrust all measures aiming at the imposition of innovations and culture-forms incompatible with the native culture-forms, all measures that aspire to "uplift" the native, and all measures that do not evolve from, or are capable of being readily assimilated with, the native culture.

3

European Clothing

The evil consequences of the adoption of European clothing by native races is generally admitted. The Rev. W. J. Durrad, in the essay from which I have already quoted, records it as his opinion that "of all the evil customs introduced by civilization, the wearing of clothes is probably the greatest".³ When cotton clothing, singlets, and trousers, is adopted in place of the simple native loincloth of bark cloth, or the fibre or grass skirts of native manufacture, or in place of no clothing at all, these badges of "civilization" are habitually worn day in and day out, wet and dry, until they rot to pieces. European clothes are the most effective promoters of skin disease, and of influenza, colds, coughs, and the pulmonary ailments that afflict races first brought into contact with civilization. While a few of the more enlightened

¹ *Report Fiji*, p. 95.

² *Ibid.*, pp. 90-1.

³ *Loc. cit.*, p. 7; also in the same volume, pp. 10, 17, 20, 31, 79.

missionaries realize the harmful effect of introducing clothing, missionary influence as a whole has been the most powerful agency in enforcing this evil custom. Even when the evil is understood, as we read it was by Bishop Patterson, we are told that "abhorrent as European clothes for natives was to his mind, the circumstances of the work compelled him to introduce their use and we read how he himself rigged his scholars in shirts and trousers when on their way to Kohimarama (the early school of the Melanesian Mission in New Zealand).¹

It is not difficult to understand why European clothes should have become associated in the native mind with Christianity. The missionary arriving amongst naked or half-naked savages, with his own mind saturated with the idea of "sinfulness of the flesh" and of the vileness of the human body, finds that in his "flock to be converted" there is an almost complete absence of bodily self-consciousness and a (to him) indescribably shocking openness and joyful acceptance in sexual matters. His first efforts are directed towards inculcating "decency" and "modesty" by creating a sense of "shame". In other words by inculcating "flesh-consciousness" and the virtue of concealment, the two sign-posts of Christian culture. In this endeavour great insistence is placed upon the importance for a woman to cover her breasts. Many, in fact most, missions insist, as a condition of their admission into their churches, upon the women being supplied with the hideous and unhygienic cotton "blouses" that form a common article of trade in the South Seas. Some missions make clothing a condition of baptism. "In the encouragement of the wearing of clothes we are not the only offenders," writes Mr. Durrad as a member of the Melanesian Mission, "the Presbyterian missionaries with far less excuse (for their own work has been from the beginning carried out altogether in the tropics) have taught their converts to dress in European clothes, although they are less in favour of this than formerly. . . . The Church of Christ, a recent development in the islands of the New Hebrides in which the Melanesian Mission works, are the worst offenders of all. They teach their adherents that no one can be a Christian who does not wear shirt and trousers"² In analyzing the *raison d'être* of missionary insistence upon clothing and of their horror of nudity, it is not only the real or supposed influence of clothing upon the native

¹ *Ibid.*, p. 8.

² *Loc. cit.*, pp. 9, 10.

mind that is relevant, but also the influence that contact with nudity has upon the missionary's own mind. That this motive should influence his attitude, the missionary is probably seldom conscious, for few missionaries practise psychological self-examination. A French Catholic missionary in New Guinea, however, once admitted to me that of all the difficulties that try the strength and temper of Europeans in their prime who set out to lead a celibate and devotional life in that torrid and sex-inflaming climate, the daily sight of, and contact with, bare-breasted young women was one of the most trying and most conducive to nervous strain.

Next to missionary encouragement and pressure, the greatest factor in encouraging the use of clothing amongst natives is the needs of the trader. The first object of the trader in his dealings with the native races is to teach them new tastes and wants which he alone can supply. Cotton cloth and steel knives are objects out of whose sale and barter the trader finds the greatest profit. In order that the natives shall become dependent upon him, the trader must create a want for these articles, and this he assiduously attempts to do. The Government authorities have, with some exceptions,¹ usually put their seal of approval upon both missionaries' and traders' efforts to clothe the native. Thus the Condominium Government in the New Hebrides make it obligatory to employers of native labour to provide each workman with a certain number of suits of clothes yearly. By a similar regulation, the Government of British New Guinea laid down in the Native Ordinance (1920) that employers must provide, in addition to cotton lava lavas issued to both men and women, "blouses . . . one monthly for females."

4

The Food Supply

Writers who attribute the degeneracy of the natives to changes in or the quality of the food staple or the quality of the drinking water must favour one of two views. On one side it is pointed out that changes in the dietary of the people and in

¹ The Government of Papua is an exception in this matter. There a regulation exists to prohibit native women wearing cotton clothes in the native villages. Mission stations are, however, exempted from this regulation.

infants' food have been accompanied by an increasing delicacy and lack of stamina, by the increase in lactary troubles and in infantile disorders ; while on the other, great stress is laid upon the inadequacy or unsuitability of the native diet and the traditional methods of using it and cooking it, especially in regard to infants' food after weaning and during the process of dentition. Those who incline to the latter view are usually strong advocates of the complete adoption of European dietary, particularly of milk and flour, by the natives. The discussion is naturally varied according to the special circumstances of the people and the district, but generally speaking it is urged that greater attention and care should be given to infants and suckling mothers, and that a more abundant food supply should be guaranteed by the supervision of, and insistence upon, native cultivations and plantations, and in order to substitute cereals instead of roots for food. Greater attention should also be paid, it is maintained, to the sources of the water-supply. As means to apply these remedies, the establishment of " Model Settlements " and the appointment of supervisory officers are frequently advocated, as well as such popular European panaceas as the Concentration of Villages and the Institution of Hygienic Missions by European Women. The contrary view that the native vegetable diet is better for the people accustomed to it than any European innovations is not without champions. Thus Dr. Felix Speiser maintains that " European food and clothes add indirectly to the death-roll as agents in the spread of disease. It may be observed that wherever the natives have given up the old vegetable diet and are living mostly on rice and meat, their health is not good. A too-strong meat diet causes boils and other complaints. . . It would be good if the sale of European foods could be forbidden except in times of famine."

Whichever view is taken of the effect of European food-stuffs, it is difficult to believe that anyone can suppose that the preserved and tinned fish and meats that are increasingly bought by the South Sea natives or are issued out to them by plantation owners in accordance with Government regulations,¹ could be anything but injurious and infinitely worse than any fresh food the natives happen to be used to, which may be deficient, but not in the least likely to be unwholesome.

¹ Sec. 32 of the *Native Labour Ordinance*, 1920, provides that $\frac{1}{4}$ lb. of preserved meat may be given weekly in lieu of fresh meat or fish, in addition to the daily ration of rice, sago, or maize.

Recruiting System, and Segregation of Sexes on Plantation

Of the two systems of labour recognized in the British possessions in the Pacific—the “indenture” system and the system of “free labour”—the indenture system still prevails in the Solomons, Fiji, and New Guinea. Under the indenture system a native is bound under a contract for a fixed period of service which cannot be terminated at the option of the labourer—usually three years—to an employer, the employer being obliged to maintain him and pay him a small monthly wage.¹ The system by which planters employ travelling agents who induce natives to enter into the contract is known as “recruiting”. In British New Guinea no person may recruit natives unless he is the holder of a recruiter’s licence.

The widespread recruiting of natives, which has sometimes in certain districts resulted in the depletion of the villages of their young manhood, is frequently pointed to as a prime cause of the native decrease. The Administrative Report on the Mandate Territory of New Guinea alleges, for instance, that the clearest evidence exists that, under the late German administration districts open for long periods to recruiters declined in population. The belief, however, expressed in the same Report that the safeguards introduced by the Australian administration have “gone far to counteract any decline of population under the indenture system” can scarcely have much greater validity than any other expression of a pious wish, in view of the fact that there are no indubitable indications of any general arrest in the decline since 1914. Further, it is not clear why the temporary removal of even a large proportion of the men² in a community in which it is known that a large surplusage of men exists must necessarily be presumed to lower the birth-rate and thus bring about a decrease of population. In barbaric communities where polygyny absorbs the surplusage of females and where normally no woman remains unmated no matter what the sex ratio may be,³ the fertility of the women will not

¹ *Report on Territory of New Guinea* (1923), pp. 51 et seq.

² Women can only be recruited under exceptional circumstances, see *ante*, p. 53, f.n.

³ See p. 16.

tend to be adversely affected by a paucity of men, though it will, as will be shown later, be adversely affected by a surplusage of men. Indirectly, however, it may be admitted that the system of recruiting men for indentured labour on plantations in many ways adversely affects the life of the villages from which they come. In the first place, a large and unrestricted exodus of young men from the villages to work on plantations leaves an insufficiency of hunters, fishers, and agriculturists, and in consequence the native food supply suffers.

All the young men recruited from their villages for plantation work are destined eventually to be returned to their homes; for it is the settled policy of the Governments in the British Possessions and Protectorates in the Pacific, in furtherance of the benevolent ideal of making the natives themselves benefit by all measures only *secondarily* designed (so we are invited to believe) to promote the commercial advancement of European settlers, that the education and training in civilization that natives must necessarily acquire during their experience on plantations and in the service of the white men's Government shall fit them to become pioneers in the civilization and "uplift" of their savage fellow tribesmen when they return to them.

In the matter of native women accompanying their husbands on plantations there are divergent views. In Papua it is discouraged¹ The Administration of the late German Colony, however, "has under consideration a proposal that, if a married man is recruited, his wife and children must accompany him."² Whatever may be done in the future, and it is doubtful whether conditions on plantations can ever hope to be very much ameliorated, large numbers of native labourers are congregated on plantations where they are kept deprived of their womenfolk for periods averaging three years. It is not only the strain which an irksome and unnatural celibacy foreign to their normal life and ideas imposes upon barbarians in the full vigour of young manhood which needs be considered, there are also the expedients that thwarted nature devises to satisfy instincts deprived of a natural outlet. I refer to just those vicarious perversions of the sexual impulse which we have seen referred to as "unnatural offences and other filthy customs" in a sweeping indictment of some aspects of the culture of certain rude and

¹ *Administration of Papua, 1907-20*, p. 12.

² *Report, 1921-2*, § 204.

uncivilized tribes.¹ But it is precisely these practices, notably masturbation and sodomy, which are fostered, and frequently inculcated for the first time, by the white man's system of segregating male labourers on plantations; yet, blind to their own culpability in the matter, white men reserve their reprobation and righteous indignation for those tribes, so far spared the vaunted benefits of the European "uplift", who "apparently must in any case disappear before long".

We need not in any way question the practical necessity of obtaining a sufficiency of native labour to exploit the agricultural and mineral resources of the tropical possessions we have annexed, yet when that necessity has been admitted, as in due honesty it must be, we may still question the expediency and efficacy of those measures introduced by the white man, not in order to satisfy his own commercial requirements, about which he is quite likely to be a competent judge, but in order to satisfy his ideal of what he thinks the dark man under his control *ought* to require, when he has been taught what his needs should be by him, the superior white. The existence of the so-called "Native Problem" is sufficient evidence that in this latter respect white men are, and have been, generally speaking, most incompetent.

Not satisfied merely with endeavouring to obtain sufficient labour with which to run plantations, mines or workshops, a benevolent white Government insists upon devising means whereby this process may be made to serve what it chooses to call the natives' own highest interests. The white man does not, therefore, remain content with ensuring for the proper treatment and care of those natives actually engaged in work under him, but hastens to use his influence upon the natives he involves in his economic system as a step towards revolutionizing the life of the natives he still does not require, and in subverting their whole social system. Native labour, it is admitted, must be secured somehow. If natives were recruited in districts in the proportion in which they could really be spared, and with the sanction of the native chiefs, the village life need not suffer much, the drain upon the young men need be little or no greater than in the old days of warfare and head-hunting; but these conditions could only be insured by the authorities controlling and themselves directing the recruiting. This course, it is pointed out, would appear like compulsion to the natives, and

¹ See *ante*, p. 49.

for this reason is rejected in place of "free" recruiting. "Free" contract gives the least sophisticated natives the liberty to be beguiled and duped by the blandishments and bribes of the recruiter, so it is preferred as being more consistent with the higher ethics and professions of white control. Again, if the men, or a large proportion of them, were recruited with their women, their lives on the plantations would be happier, less conducive to "unnatural and filthy customs", and, having once become alienated from their tribal life, their service would be extended, while their progeny would gradually become available for work and so lessen the drain upon the tribal communities. This solution is usually rejected because of the fiction that the native drawn into our economic system, educated and inculcated with the elements of European ethics, must be benefited and "uplifted", therefore he must suffer certain deprivations during his term of service in order that he may return to his tribal unit and help to "uplift" his own people. This he accomplishes by being taught to work for monthly pay instead of for the clan, by being taught the ethics of individual responsibility, by being taught new wants and habits that can only be satisfied by payments in kind or by service to white traders who alone can provide the articles which gratify these new wants, by being taught to forget his own language and learn a new universal one (Papuan native dialects are so various and distinct that natives drawn from many districts and congregated on one plantation have habitually to talk "pidgin" English to one another in order to make themselves understood). He is taught that his own customs and moral inhibitions are contemptible superstitions, that the transgression of the new codes he is told to respect does not bring automatic punishment like the consequences of his own violated tribal taboos, but only such punishment as can be meted out to him by his white masters when his transgression is discovered, and that, consequently, observance of the moral code of the white man consists in not being found out; this lesson he also learns in time is the white man's own way of looking at sins and transgressions. In short, he is thoroughly and in every way detribalized, and having been detribalized he is considered fit to be sent back to his tribe, to the life he is no longer well adapted to. Here, if he has learnt his lesson, he becomes a functionless and discontented rebel against the tribal life and the authority of the clan or tribal chiefs.

It is customary for those who, not unnaturally, wish to defend our seizure and administration of New Guinea to point with pride to recent enactments under the Native Labour Ordinance which have greatly limited the power formerly exercised by white employers over their native labourers under the German administration, such as the right to inflict corporal punishment on native employees, which was held to be "entirely repugnant to Australian sentiment".¹ Under the Ordinance of 1922, anyone who inflicts corporal chastisement upon a native is liable to a fine of £100 and to imprisonment for six months. Stringent regulations have been introduced to prevent girls or women from being recruited, employed, or engaged by Europeans with the exception of married women accompanying their husbands and the exception that a native girl (over ten years of age) may, with the consent of the Administrator, be engaged by a female employer for domestic work. Neither may female natives be carried as passengers on vessels unless accompanied by their husbands and with the consent of a District Officer.² The custom of planters, traders, and officials, formerly tolerated under German Administration, and against which this enactment is directed, was also repugnant to Australian sentiment. With all sincere deference and respect to the democratic, humane, and moral sentiments of our white Christian populations, living far from the tropics, it must be remembered that these measures, which may redress the outraged sentiments of Europeans, are not, for this reason, by any means bound to prove an equal solace, or even to be related to the natives' own sentiments which Europeans find so difficult to understand, and that real improvement in native welfare can certainly not be judged by the success of appeals to European sentiment and humanitarianism. In fact, it is not very difficult to show that these measures, which commend themselves especially to Europeans who know little or nothing of the real Native Problem, only serve to prejudice further the relations between the governing and subject races.

In their native state, Papuans, like other "savage" peoples, showed little inclination to disobey their chief or violate their taboos; respect for tradition and witchcraft effectively restrained even the most unruly insurgents, but placed under white men's control on plantations or mines, and suddenly emancipated from the discipline and inhibitions

¹ *Report for 1921-22*, § 254.

² *Ibid.*, §§ 214-16.

as well as incentives of their tribal life, they can be restrained or induced to work only by their respect for, or fear of, their white master's power. Penalties that involve no physical pain, such as prison, make little or no impression upon them, and like children they are apt to lose respect for the authority of those whose power they do not fear. It can as truly be said of the Papuan as it has been of the Fijian, that "prison entails no disgrace and little inconvenience, and, besides death, the only penalty he fears is corporal punishment."¹ Although under the German Administration the flogging of natives on plantations was with certain restrictions tolerated, the practice is not credibly reported to have been abused in the manner it is known to have been abused when flogging was "abolished" by the Australian Administration and when in consequence it took place surreptitiously and by irresponsible persons. It is also to be feared that the natives' respect for the white man has steadily diminished of recent years.²

Similar considerations will suggest the illusory nature of the other supposed protective measure, forbidding the engagement of single women by Europeans, designed principally to prevent Europeans from keeping native concubines. The German Administration realizing that, since few of their officials, traders, or planters could in such a climate be accompanied by their women folk, all classes of white settlers would inevitably be brought into relations with the native women, encouraged them to select native girls and keep them openly and with a sense of decency and responsibility; at the same time dealing severely with all casual interference, or, in the slang of the English traders, the "pulling", i.e. abduction, of native women in the villages, which is such a prolific source of friction and bad feeling between natives and whites. As soon as open relations, which when undertaken without violating native customs and ideas were understood and respected by the natives, were forbidden, the very worst consequences of surreptitious and promiscuous interference with the women of the villages inevitably followed, and still continues notwithstanding professed official ignorance or attempted denial. Eventually this will assuredly lead, where it had not already done so, to a commercialized and more or

¹ *Report Fiji*, p. 64.

² This opinion is the result of repeated statements made by both responsible whites, including officials under the new administration, and by natives to the author in 1921.

less furtive prostitution—a far less desirable institution than concubinage.

In order to avoid equivocation it had better be admitted frankly that if the white man's labour requirements entail any deleterious consequences to the natives, the harm done is infinitely greater and the greater part of it also wholly unnecessary when, in order to persuade himself and the world at large of his altruistic and benevolent intentions, he aggravates the conditions of the native labourers he cannot dispense with, for the sake of extending his influence and interference to those natives still in the tribal state which he might just as well leave alone. This applies particularly to the labour problem in New Guinea, where there still remains the possibility of preserving the tribal life of a considerable proportion of the natives. In short, I am pleading that well-intentioned, but misguided benevolence is as disastrous and mischievous to the natives as it is undoubtedly comforting and soothing to the white men who organize and subscribe for it, but that as it is a wholly unnecessary luxury it is one they could and should forgo

6

The Influence of the Native Communal System and its Abolition

Those engaged in the task of "civilizing" the native, which involves the destruction of the native culture as the necessary prerequisite to the superposition of a different culture, are impressed with the tenacity with which native races cling to the integral elements of their own culture represented by the native communal system, and the chieftainship system. Convinced, *a priori*, of the inevitable good that their benevolent efforts must have accomplished, they scarcely ever fail, as a consequence, to detect evil results accruing from all that opposes their own efforts. It is, therefore, scarcely to be wondered at that many Europeans have attributed all sorts of evil consequences as the outcrop of the native communal system and of the powers and functions of the native chiefs. A proper understanding of this system, and of the real effects physical and psychological of cultural disintegration is of great importance. I have enlarged on this theme in Chapter XII.

7

European Alcohol and Native Narcotics

The use of alcohol among the native populations is no longer a general problem in the Pacific. It was not mentioned in the Fijian Report on the Decrease of Native population, where, instead, the possible ill effect of tobacco and the traditional native drink of Yanggona or Kava (*Macropiper methysticum*) is discussed. Alcohol is still reported to be a serious problem, however, in the New Hebrides, where "owing to the difficulties connected with the dual control of the group, apparently nothing can be done."¹

When alcohol cannot be cited as a cause of native decrease, an attempt is often made to make whatever serves as the native substitute bear the blame. Various and serious ill results have been attributed by some Europeans to Kava drinking, a custom which plays such an important part in the ceremonies and feasts of most of the branches of the Polynesian peoples. In the New Hebrides, and other Melanesian groups, the betel nut with the pepper leaf more usually takes its place, and has also, accordingly, been viewed unfavourably by some European critics. In Fiji the Wesleyan missionaries forbade the use of Kava and of tobacco by their church members. The report of the Commission² leaves little doubt that no ill results can be attributed to the normal or usual habit of Kava drinking nor of tobacco smoking, excepting possibly an excessive indulgence in these habits by suckling mothers.

8

Disease and Infant Mortality

(a) *Causes of Decrease are not accounted for by merely enumerating Selected Factors of Elimination*

When we treat of disease as one of the groups of factors conditioning the increase or decrease of a population as a whole, we approach the question from the demographic rather than from the medical aspect. Medical men who approach the

¹ Durrad, loc. cit., p. 7; also cf. Spicer in the same work, p. 29, and Rivers, p. 80.

² p. 109.

problem of Depopulation in the Pacific are, not unnaturally, apt to lay more stress on those factors of elimination which come within the scope of their special study in hygiene and medicine than on other facts contributing to these races' new failure in adaptation; although, following the lead of Rivers, a greater number of medical investigators than formerly are now willing to include psychological factors as contributory in producing a decline.¹

In the last chapter an indication was given of the general grounds on which it was held that the introduction of new diseases did not provide a sufficient cause to account for the decline of a population, since the presence of, and even increase in, any arbitrarily selected group of checks to population or factors of elimination may be more noticeable in populations that are increasing than in some populations that are decreasing. Whether the mortality rate is high or low, increasing or decreasing, if the fertility and survival rates fail to balance the rate of elimination the population must decline.

Temporary or ephemeral checks to population, such as the frequent famines and epidemics of plague which from time to time have retarded the growth of the teeming populations of India or China, do not inaugurate a decline. Introduced epidemic diseases, nevertheless, can be expected to make more formidable ravages when first introduced among a people than those endemic diseases to which they have become to some degree habituated. The enormous toll that such diseases as measles² or dysentery have taken, and the rapidity with which they carry off large numbers of victims among Pacific peoples, are, however, apt to lead us to assume that nothing further need be mentioned in accounting for the gradual decline or extinction of people who are exposed to such ravages. Yet as we know European countries were for centuries swept with the most virulent epidemics of plague introduced from the East, which after each visitation left the population to pursue its former rate of expansion when the epidemic had, for the time being, spent itself. Short of complete extermination, it is difficult to see

¹ Dr. R. W. Cilento, in a paper on "The Depopulation of the Pacific", attributed the decline in German New Guinea to disease, economic and social factors, and psychological factors, *Proc. Pan-Pacific Science Congress*, 1923.

² The 1874-5 epidemic of measles was responsible for carrying off a large proportion of the population of Fiji, though it does not account for the continuous previous or subsequent decrease.

how the ravages of epidemic disease could account for the gradual decline of a people, nor is there sufficient reason to suppose that the epidemic diseases recently introduced by Europeans into the Pacific were relatively any more lethal than, for instance, epidemics of bubonic plague introduced into Europe between the sixth century and the eighteenth.

The plague of Justinian which started in A.D. 542 spread from Egypt to Constantinople, where it is reported to have carried off 10,000 persons in one day, and in 565 to have depopulated Italy, again breaking out in Rome in 590. Better known still was the great cycle of epidemics in the fourteenth century known as the Black Death, supposed to have been bubonic plague, which was introduced from the East. It gradually overran nearly the whole of Europe, reaching England in 1348, and prevailing in parts of the country until 1357. Oxford is recorded as losing two-thirds of her academical population from this disease in 1352. Its mortality, as is well known, was enormous, being variously estimated in different parts of Europe as two-thirds and three-fourths of the population, and in England even higher.

In the fifteenth century, and also in the sixteenth century, the plague recurred in nearly all parts of Europe, with destructive effect. In Paris 40,000 deaths from plague were recorded in 1466; in the epidemic of 1563-4 a thousand were carried off weekly in London, while that city suffered hardly less severely again in 1580 and 1592. In 1570 the plague carried off 200,000 persons in Moscow and its neighbourhood; and in the same city in 1771 a similar epidemic reduced her population by nearly a quarter. The plague was not less destructive in the seventeenth century in England, a large mortality being registered in London in 1603, and during the succeeding six years it exacted a large toll in many parts of England as well. London was again visited by plague in 1625 and 1636, while in the Great Plague of London in 1664-5 the huge mortality of 68,596 was registered in one year, although two-thirds of the population of 460,000 fled to the country to escape the contagion.¹

The idea that the lessening of elimination through disease must of necessity of itself tend to bring about an increase in population is just as far removed from facts as the reverse idea

¹ J. F. Payne, Article on Plague, *Encycl. Brit.*, 9th edition.

that an accelerated rate of elimination through disease must indicate a decline in population. More often, though of course not invariably, an increase in the mortality rate from lethal diseases must tend to be accompanied by a rapid expansion of population, for the intensity of the action of the diseases from which mankind has suffered from the earliest times—and bacteria have been found as far back as pre-Cambrian times—has increased coincidently with his aggregation into crowded communities. Thus the conditions which favour the evolution and propagation of diseases are those which also favour a rapid increase of population, and of the food supply which conditions its increase.¹

In order to provide an illustration of how little a lower mortality rate corresponds to any relative higher rate of increase, we might compare the mortality rates of the three main ethnic stocks of the United States of America, the Negro, the Red Indian, and the White. Of these three stocks, the black race has shown the most consistent and continuous natural increase from three quarters of a million to nearly ten millions in the period of 120 years from 1790 to 1910. On the other hand, this rate of natural increase has not been exceeded by the native white population, while the Red Indian population has shown no tendency to increase except to some extent (since 1900) in the mixed blood accessions to its population.² A comparison of the mortality rates (all causes) of these three stocks shows the highest death-rate among the stock where increase is most marked and lowest among the stock which shows the least tendency to increase; the rates (in 1910) being: (Registration Area) Negro, 25.7; White, 14.6; Indian, 11.0.³ So conspicuous an excess of negro over white rates, amounting to 10.9, is remarkable. Since 1910 the rates had declined slightly for the three stocks; the rate for the negro population showing a decline

¹ Cf. R. L. Moodie, *Palæopathology* (1923); and Carr-Saunders, *Population Problem*, p. 156 et seq.

² See p. 267 *infra*.

³ Representing number of deaths during calendar year 1910 per 1,000 of population of each class on 1st July, as estimated upon the basis of the census enumeration of 15th April, 1910. The significance of the comparison remains even though, as suggested by the Census officers, it is possible that a larger proportion of Indian than of other deaths escape registration, the Indian rate thereby being depressed relatively to the rates for other classes. (Bureau of the Census Dept. of Commerce, *Negro Population of the United States, 1790 to 1915*, p. 305.)

of 3.9 (compared to a rate of 29.4 in 1900) and the white a decline of 2.5 (compared to a rate of 17.1 in 1900).¹

Again, if the incidence of introduced diseases corresponds to any tendency in a population to decline, we should not expect the incidence and mortality of tuberculosis—one of the diseases often selected as the most lethal and responsible for decline of population—to be nearer three times higher among the negro than among the white. Yet the respective death-rates from tuberculosis of the white and negro populations in the United States were in 1913: White, 1.7 per 1,000; Negro, 4.85 per 1,000. The Indian, however, is slightly higher still, 5.06 per 1,000. The negroes have a high rate of mortality from syphilis (3,059 deaths out of a total of 67,266 in 1913), while this disease is acknowledged to be very rare among the Indians.² The negro-death-rate from respiratory diseases, except tuberculosis, in 1910 was nearly twice that of the whites.

Accounts of the introduction to native populations of new infective diseases by Europeans, and of the undoubted destruction wrought by such scourges, are too familiar to need recapitulating here; less attention has, however, been paid to those diseases which existed before the appearance of Europeans in the Pacific. But that they were, from the earliest times, occasionally visited by severe epidemics there can be little doubt. Turner, for instance, records a tradition in Samoa of an epidemic answering the description of cholera, which raged with fearful violence

¹ If the efforts of Public Health authorities to reduce the negro death-rate to the low rate of the white or the Indian rates, without at the same time proportionately reducing their birth-rate, were capable of being successful it would be very rash to assume that they would be hailed as public benefactors by the white citizens of the United States.

² A disease often held responsible for decrease of population among subject races. According to some authorities it is to be credited among civilized races with (directly or indirectly) a higher death-rate than tuberculosis. Cf. Sir William Osler, *Lancet*, 28th May, 1917.

Its mortality, computed by accepting the death rate from *tabes dorsalis* and general paralysis of the insane as implying infection with syphilis, has also been reckoned double that of diabetes. Stephenson, *Social Distribution of Mortality from Different Causes*. Biometrics, vol. xv (1923), p. 390. Sir James Barrett, giving evidence before the Royal Commission on National Insurance held in Melbourne, stated that "out of every 100 people who die in the Melbourne Hospital, 30 per cent are syphilitic, though not signed up as syphilitic patients". (14th June, 1924.)

There appears to be no evidence, however, that venereal diseases have caused relatively greater havoc when introduced among primitive races than they do continuously amongst civilized European peoples.

For reference to the rarity of the parasymphilitic diseases among the Red Indians, see *U.S.A. Senate Documents*, vol. xxv (1912-13), p. 58.

in pre-European times.¹ On Aua Island the natives formerly suffered from malaria and pneumonia, and they recollected severe epidemics resembling dysentery which used to occur before the visits of white men. It seems by no means certain that dysentery was unknown throughout the Pacific regions until it was introduced by Europeans, although this was the opinion of the Commission on the Fijian Decrease, and most other writers have held this opinion.

Dr. Newman maintained that the diseases from which the Maoris formerly suffered were consumption in its various forms, malaria, diarrhoea, bronchitis, pneumonia, rheumatism, scrofula, epilepsy, dropsy, and a species of leprosy (ngerengere), although they were formerly immune from small-pox, syphilis, measles, scarlet fever, whooping-cough, typhus, and (probably) typhoid.² This is borne out in the main by some of the earliest accounts of the Maoris. Cruise in 1820 mentions that "consumption, violent rheumatism, and an infectious fever were prevailing diseases of the New Zealanders".³ It is, however, interesting to note that neither Newman nor previously Judge Fenton were able to credit the new diseases with a determining part in producing the astonishingly rapid decline of the Maori population. Syphilis, for instance, in spite of its recent introduction, appears to have been less severe in its effects upon the Maoris than upon Europeans. "Though affected by it, its results are rarely severe. Several doctors who practice largely among the Maori assure me that they never saw true syphilis in a Maori. . . I have never seen Maori children with any marks of syphilis."⁴ As previously noted, what occasioned these investigators most surprise was the fact that the Maori population continued to decline rapidly after some of the principal factors of elimination, such as devastated inter-tribal wars, had been removed.⁵

¹ *Samoa a Hundred Years Ago and Long Before*, p. 137 et seq.

² *Trans. N.Z. Inst.*, vol. xiv (1881).

³ R. A. Cruise, *Journal of a Ten Months' Residence in New Zealand*, p. 300 (1823).

⁴ Newman, *ibid.*, p. 489.

Dr. P. H. Buck (Te Rangi Hiroa), giving evidence before the Committee of the Board of Health inquiring into venereal diseases in New Zealand, suggests that in the past much of the Maori sterility is attributable to the ravages of syphilis. This opinion, however, contradicts contemporary accounts; moreover, Dr. Buck reports that in his own experience of "eighteen years' constant work among the Maoris the venereal disease has been comparatively rare. It disappeared amongst the people." There is no doubt from the evidence that it has been ever very much more prevalent among the European than among the Maori population (*vide Report, New Zealand, 1922, H-31A, p. 10*).

⁵ See Chap. II, p. 22.

Newman, on this account resorts, rather lamely, and without attempting to produce any evidence for the opinion, to the theory that the Maori were already a dying race (owing to the supposed effects of inbreeding) before the arrival of Europeans, while Fenton attached most importance to the deleterious influence of putrid corn which commenced to be used as a food staple about 1830.¹

(b) *The Process of substitution of population is not a process of immunization*

Many writers² have advanced the theory that by long-continued natural selection, a type will develop more or less immunity to certain diseases, so that in every part of the world each climate is ideal for the type adjusted to it by long periods of the survival of the fittest or most adaptable, and is harmful for every other type. Illustrations are given showing that the longer races are acquainted with a disease the less harmful it becomes. It is pointed out, for instance, "that measles is exceedingly fatal to savage races which have never been infected, but it has eliminated from civilized people nearly all those who cannot promptly develop antibodies to kill off the invading organisms." The same reasoning is supposed to account for the relative mildness of mumps, whooping-cough, and chicken-pox among civilized populations, and, inversely, the severity of these diseases when they spread among the native populations of Melanesia. "On the other hand, tropical races have evolved a tolerant immunity to malaria, and will harbour the germs for years without signs of harm until their resistance is broken down by an extra infection." In this way it is said races become immunized in time to introduced diseases and other imported lethal influences. However useful this generalization may be in its proper sphere in accounting for the gradual evolution of relative tolerance to certain diseases in certain climates, it should not be resorted to in order to account for the stabilization and eventual increase in population of races which upon first contact with Europeans started to decline. For this is to confuse immunization of population with substitution of race.

The apparent arrest in the decline of the Maoris and of other Pacific populations, and the rapid increase in the American

¹ Fenton, *Observations on the Aboriginal Inhabitants of New Zealand*, p. 40.

² Refer esp. to C. E. Woodruff, *Medical Ethnology*, p. 259 et seq.

negro population has incorrectly been attributed to this supposed progressive immunization. It is not only that, as we have mentioned, a high and even a rising mortality rate from disease does not indicate, nor of itself tend to produce, a decline in population (and therefore, inversely, immunization is not capable of accounting for a rise in population), but immunization implies that there is a real biological continuity between the racial stock that is at first badly equipped to resist the introduced diseases and their descendants who become inured or better adapted to resist the new lethal influences. If, however, the original stock commences to mix its blood with immigrant and alien stocks better adapted to survive under the new conditions, it cannot be claimed that their miscegenated descendants owe their survival to any process of immunization instead of to the fact that they derive their better adaptation from their European or better-adapted progenitors. That the gradual infiltration of European blood into a declining native population is the true cause of its subsequent stabilization and increase is certainly suggested by the fact that most of the populations we are considering only started to expand again after a few generations had elapsed and they had to some extent mixed their blood with the immigrant Europeans, while those examples of races that had become completely extinguished, such as the Tasmanian or the Victorian Australian tribes, had failed to rear mixed-blood descendants.

We find, therefore, that we are dealing with a process of population substitution and not, as often supposed, with immunization. This process is illustrated schematically in reference to the Maori population in the diagram on p. 279 (Appendix I).

(c) *A high Infant Mortality Rate of itself is neither a Cause nor an Index of Racial Decline or Degeneracy*

Although infant mortality is included for consideration under the general heading of elimination by disease, it may be well to notice separately a few points with regard to the real or supposed significance of a high or low rate of infant mortality.

There is probably no source of elimination more variable with race, country, and environmental conditions than the infant death-rate under one year of age. While it has been

calculated that the yellow race has an average infant mortality of about 450 per thousand births, in China one-half of all infants die before they reach one year of age, the average for the white races is close to 150; in India according to recent figures the rate is close on 360, and for the negroes of the United States (1901 to 1910) the rate was 241 for males and 206 for females, which is probably below the average rate of the black races in Africa. Within the range of the white races there is very considerable variation between the lowest infantile death-rate of New Zealand (1922) of 42, followed by Australia with 53, and of Chili's (1914) rate of 286. Even in each country there is considerable variation between different groups and different districts both in infantile mortality and in fertility or birth-rate. Numerous investigations ¹ into the subject in Europe and America have shown the tendency for a higher infantile mortality in urban than in rural districts, while there is another general tendency in European countries for infant mortality and fertility to increase downwards along the social scale, as well as a tendency for a high birth-rate to be accompanied by a high infantile and crude death-rate. The rather noticeable fact that those countries showing the lowest infant mortality rates during the last two ten-year periods of the nineteenth century, such as New Zealand, Australia, Norway, Sweden, Holland, and England and Wales, were also the countries that succeeded in making the greatest percentage reductions during the last decade or two, has led most hygienists to conclude that infant mortality is everywhere and amongst all people capable of being reduced to a negligible percentage by the efficient control of pre-natal and post-natal conditions practically irrespective of any ethnic or constitutional variations which may exist. In this vein Newsholme is quoted,² "infant mortality, the deaths of children under one year of age, is the most sensitive index of social welfare and of sanitary improvement which we possess." There are, however, some grounds, viewing the subject from the viewpoint of sociologist and demographer, for at any rate setting a definite limit to one's faith in the strict amenability of infant death-rate variations to hygienic control. Still more is one inclined to challenge those other assumptions, either openly

¹ East gives a concise review of infant mortality investigations in Chapter VIII of his *Mankind at the Crossroads*.

² By East, *ibid.*, p. 24.

or implicitly made, that a low infant mortality rate is an all-sufficient index of both social prosperity and a high physical standard of health and, inversely, that a high rate of infant mortality is an invariable indication of a low standard of health.

Before examining this view in relation to civilized European countries, we may first of all turn our attention to those non-European races habitually showing a large infant mortality. Carr-Saunders has recently marshalled the most complete and extensive evidence on these points in regard, particularly, to primitive hunting, fishing, and agricultural races, and his evidence can be supplemented by the most extensive reference to researches of travellers and ethnographers. With the most remarkable consistence we find that among these races, before contact with European civilization, a high infant mortality is accompanied by conspicuous longevity, general good health, and absence of disease, while a high rate of infant mortality is generally artificially enhanced by the practice of abortion and infanticide, often enforced by social customs and laws for the purpose of limiting the population at its optimum density consistent with the food supply. The good health of Australians, Tasmanians, Bushmen, and Eskimos has many witnesses,¹ longevity is specially mentioned as a characteristic. Infanticide is practised by them and child mortality is heavy.² The good health of the North Americans and the great age to which they formerly lived is constantly referred to. Different witnesses say this of the Thlinkeets, the Shushwap, the Nootkas, the Californians, the Abipones, the Botocudos, and the Patagonians. Among all these races, however, "there is abundant evidence that the rate of child mortality is very high. The causes of death are most often due to exposure as the result of improper treatment or of certain customs, or to want of suitable food."³ Of many races in both North and South America the same observations are recorded, the women save but few of their children; most die in early infancy. The practice of many of their customs seem designed to eliminate all but those with the strongest constitutions. And, judging by the general good health and natural longevity of these races, they succeeded in this. Thomson

¹ Carr-Saunders, *op. cit.*, pp. 158, 231.

² *Ibid.*, pp. 218, 238, 160.

³ *Ibid.*, p. 159.

mentions that in spite of tribal warfare most Fijians succeeded in living to a good old age.¹ The latter people practised infanticide. According to Turner, before the introduction of Christianity "probably not less than two-thirds of the Samoan race died in infancy and childhood. This mortality arose from carelessness and mismanagement in nursing . . . while fœticide and infanticide were common to keep down the population."²

The first missionaries to Tahiti reported upon the excellent health, the fine physical standard, the remarkable stature—particularly among the more inbred chiefs—and the longevity of the population, before the degenerating influences of European contact brought about a sad decadence. "A cripple is hardly ever seen among them in early life. A rickety child is never known. The men in general are above our common size; but the chiefs a larger race, few of them short of six feet high . . . They carry their age well, and are healthy and vigorous at a very advanced time of life, if not infected with disease—such as Europeans have introduced. The exact amount of their years can only be collected from circumstances, as they keep no regular computation of time; yet from events which they relate a pretty accurate calculation may be formed. Many were alive in 1791 who remembered the loss of one of Roggewein's squadrons at an island north of Otaheiti in 1722."³ Although the population was at this time as dense as the island could possibly support,⁴ the infant death-rate must have been very high and infanticide extensively practised, and even inculcated by the famous Arioi Societies..

In New Guinea among tribes not in contact with Europeans good health is the general condition; disease is always looked upon as abnormal and as the result of magic, although there is reason to believe that even in former times epidemics occasionally broke out. Abortion and infanticide is practised. On Aua Island, during my visit in 1921, the oldest inhabitant had died at the age of over seventy, such ages were said to be far from uncommon in the old days; now very few survive to forty-five. Here, it may be remarked, abortion and infanticide were never practised.

¹ Thomson, *Fijians*, p. 86.

² Turner, *Samoa*, pp. 135, 292 et seq. Ibid., pp. 196, 250.

³ *A Missionary Voyage to the Southern Pacific Ocean in the Ship Duff*, compiled from the Journals of the officers and the missionaries (1799), p. 336 et seq.

⁴ See ante, pp. 21-2.

Conditions appear to be the same among Asiatic races. Carr-Saunders collects evidence on Samoyed, Kamtchatka, Ostyaks, and other Asiatic tribes. Those enumerated are reported to "enjoy the best of health and attain a very old age", while infant mortality is said to be large, and abortion and infanticide commonly practised.

In Europe in the Middle Ages child mortality was apparently very high, as also was the general mortality rate from disease. The reduction in infant mortality rates has been accomplished in fairly recent times.

Regarding the whole question from the widest perspective of both historical time and geographical place, it appears to be clearly established that the lowering of the infantile death-rate has had no necessary connexion with any abatement in the incidence of disease, nor with any rise in the standard of health (on these points there is further evidence to be considered), nor with the stability or decline of races. As far as the declining races of the Pacific are concerned, there can be little doubt that actually the decrease in their infant mortality rates has not infrequently been the measure of their decline in numbers and in health, and in diminished longevity. The reason that these factors may accompany each other is, of course, apparent, and due to no necessary causal connexion between them. It should not be forgotten, however, that under the old conditions of their primitive hunting or agricultural existence the large mortality of infants operated as a rigorous selection of the tougher and most robust types, eliminating the feebler constitutions.

Lethal selection through disease under the conditions of modern civilization by no means eliminates the same types. The modern tendency of densely populated urban existence is to weed out those most susceptible to the attacks of parasitic diseases, whilst diseases due directly to structural defects, and seldom lethal until after maturity, tend to exert an increasingly diminished selective influence, as advances in general sanitation, surgery, and the extension of public services in aid of the most impoverished and the most helpless elements increase the chance of survival of both mental defectives and of all those exhibiting defects in structure. Thus it comes about that the types best adapted and capable of surviving under the congested conditions of urban life are at the same time often the types that are structurally the most defective. The well-known characteristics

and peculiarities of Jewish demography form a striking illustration of this double process. They indicate that the Ghetto Jews of Europe by reason of their long segregation and selection under the most adverse conditions have become far more perfectly adjusted to crowded urban life than other people. It is well known that the Jew, although of poor physique, is naturally resistant to every form of microbic disease, and being well adapted to poor living conditions is correspondingly hard to kill. In every part of the world the Jewish communities invariably show a low rate of infant mortality.¹ All over the world the Jewish death-rate from tuberculosis varies from one-half to one-fourth that of the surrounding non-Jewish population.² Yet it is equally well known that the Jews do not owe their relative immunity to pulmonary diseases to any superiority of lung development, since Jews are notoriously narrow-chested.³ Judged by any standard demanding physical exertion and muscular efficiency, the Jewish communities fail. Thus during the war Leeds, with an unduly large proportion of its population consisting of Jews, many being poor migrants from Russian Poland, showed the highest percentage of men unfit for service of any town in England.⁴ Yet it is the influx of Jewish migrants of this type which tends more than any other factor to reduce the infant mortality rates of big cities like New York, as will presently be shown by reference to recent mortality tables. It is worthy of note, too, that the diseases to which Jews appear to be particularly predisposed are not of a type likely to find any reflection in infantile mortality rates. Their predisposition in developing diabetic affections has led, Fishberg reminds us, to diabetes being called by some German physicians a *Juden-*

¹ Fishberg, *The Jews*, pp. 259-65, 306-8.

² *Id.*, *New York Med. Record*, 26th December, 1908.

³ So frequently and ubiquitously have the Jewish populations been characterized by a tendency to flat and narrow chests that many authors have described what they call a "Jewish chest". The Jewish conscripts of Russia, Poland, and Austria were found to be notoriously deficient in this respect, and to compare unfavourably with the Slavonic recruits in the same countries. Fishberg denies (in accordance with his general argument that there are no peculiarly "ethnic" Jewish traits) that this narrow-chestedness is in a strict sense a racial and hereditary trait, although he admits the generality of the contrast in this respect between Jewish and non-Jewish people. He also, however, appears to endorse Ripley's not quite consistent opinion that "even if granted that the narrow chest of the Jews is an acquired characteristic, the effects of long-continued subjection to unfavourable sanitary and social environment, it has none the less become a hereditary trait". *The Jews*, p. 85 et seq.

⁴ Refer Sir James Galloway's *Committee Report on Medical Board Examinations*.

krankheit, a Jewish disease.¹ It is not without cause that the proneness of Jews to diabetes as well as to other complaints, such as nervous dyspepia, has been associated with the passionate nature of their temperament. Emotional excitement, worry or anxiety have so often been followed by diabetes that the disease was acknowledged to have been caused or stimulated by these excitants long before recent experiments in the process of adrenal secretion established the connexion between glycosuria and emotional tension. Rudisch came to the conclusion that diabetes is nearly three times as prevalent among Jews as among Christians. Stern found that their mortality from this cause during 1899 was relatively more than double that among the non-Jewish population. All these facts should encourage us to give sufficient weight to the disturbing influence upon morbidity rates of ethnic or constitutional characteristics developed by competing and differentiated groups under stress of a ceaseless and anxious struggle for existence and supremacy. In other words, the importance of recognizing a differential susceptibility among different ethnic groups exposed to the same environmental influence—mental and physical.

The following provides a further illustration of the influence of innate hereditary factors in relation to hygienic factors upon infant mortality rates. When the crude rates of infant mortality in New York City in recent years are examined the declining rate appears to reflect the influence of successful hygienic control and improvement in living conditions.² The credit which might naturally be claimed on this score is, however, found to be illusive, since a more intensive examination reveals the influence of a less noticeable factor in the change in the racial composition of the population of the city, due to the large stream of immigration. From the source quoted it appears that 36,992 infants were born in 1915 to parents one or both of whom were native-born Americans. In the same year no less than 65,946 infants were born to Italian and to Russian-Polish and Austro-Hungarian parents, the latter two nationalities being almost entirely Jewish. If these latter are excluded from consideration, the infant mortality rate of the city during the year 1915 becomes 105 instead of 98.2 per thousand, which is the rate *inclusive*

¹ Fishberg, *ibid.*, 297-302.

² The following figures are quoted from the 1921 Rockefeller Foundation International Health Board, *Report on Infant Mortality in New York City*.

of all races ; the mortality rate for infants classed as American born being 106·3 per thousand. These contrasts are even more marked when a comparison is made of the rates of deaths from congenital diseases, the mortality rate from these causes being 12 per cent higher for the native Americans than for all nationalities combined. The unavoidable conclusion is, therefore, made that the increase in the foreign element of the city tended to accelerate the rate of decline of the infant mortality rate.

Decrease in the infant death-rate could *not* therefore be attributed to improvement of health conditions for infants. The apparent improvement—at any rate by far the greater part of it—must be credited to a change in the racial make-up of the city, particularly to the influx of Jewish immigrants.

Before accepting a lower infant mortality rate as evidence of superior general health, we are inclined to inquire how far it is any indication of constitutional and organic efficiency. But it is precisely in this direction that we can, as already pointed out, least expect encouragement. Public-health work has certainly reduced infant mortality and has effected reductions in diseases of the respiratory system and the alimentary tract. But, on the other hand, we find in those English-speaking countries which are proud of their low infant mortality rates an actual increased mortality in infantile diarrhoea and enteritis, congenital debility, and malformations, and cancer. In both New Zealand and Australia,¹ who lead the world in a low infant mortality rate, cancer is annually responsible for more deaths (1917 to 1921) than can be assigned to any other cause other than disease of the heart. Comparing the cancer mortality rates in England, Australia, and New Zealand, the actual annual rate, as well as the rate of increase during the ten-year period, is higher in the same order that the infant death-rate is lower. Chili, on the other hand, with the highest infant mortality rate of any white country, has one of the lowest rates of cancer mortality. The next highest cause of mortality in Australia and New Zealand is assigned to congenital debility and malformations ; here again there is no sign of decrease. Since 1920 nearly half the deaths of children under one year of age in Australia are due to congenital causes, but the mortality figures

¹ Here and in succeeding paragraphs reference is made to the figures published by the Commonwealth Bureau of Census and Statistics, and in the New Zealand official *Year Books* ; a few comparisons refer to figures given in Davidson's *Geographical Pathology* and East's *Mankind at the Crossroads*.

do not adequately represent the gravity of the hygienic or eugenic aspect of the question, since for every infant death due to congenital causes there are many survivors who, if they reach maturity, suffer permanently from the handicap of a congenital defect.

It is still more instructive, though decidedly less encouraging, to note the lack of correlation between infant death-rate and maternal mortality. It may even be said that, generally speaking, the marked decrease in infant mortality has been accompanied by no decrease in maternal mortality. Among primitive races brought under European control, decrease in their infant mortality has, so far as the evidence goes, accompanied an increased maternal mortality. As a national and biological asset the young mother, who has safely escaped the chances and dangers of infancy and childhood, has reached her supreme value; an increased saving of infant life cannot compensate for the sacrifice of maternal life, yet over five mothers succumbed out of every thousand live births registered in Australia in 1921 during the exercise of a natural function that would barely cause the old-time Maori women—notwithstanding a higher infant death-rate—to pause for longer than a few minutes if it occurred during a day's march. New Zealand, again, shows a comparatively high death-rate from puerperal causes considered in relation to number of births, while the figures show a tendency to increase. In the same order as before in relation to England and Australia, the lower infant death-rate in New Zealand accompanies the higher maternal mortality. No country in the world has more energetic, or efficient, better organized, nor so well subsidized public health departments than the United States, yet medical effort has been powerless to reduce materially "the annual toll of 16,000 women through the exercise of a normal function, and the death-rate has hardly changed in twenty years, even though puerperal fever has almost been abolished".¹

Basing our comparisons on the 1901-10 averages, in the following countries, New Zealand, Australia, United States, Scotland, Spain, France, Belgium, and Switzerland, maternal mortality, averaging between five and six per thousand live-births is roughly twice as high as it is in Sweden, Italy, and Norway, where it averages less than three. It is perhaps fortunate that we have no figures by which to calculate by how many times

¹ East and Jones, *op. cit.*, p. 222.

the lowest European rate exceeded the Maori rate of maternal mortality in the days before we arrived to train them in the latest and most scientifically approved methods in obstetrics and midwifery.

Since, however, there are no means of procuring figures that alone can convince those minds who will think in no other terms, we must base our opinion on other material. There is every reason to suppose, from what we know of their customs, that in the matter of child-bearing there is little to choose between the hardness of one Polynesian or Melanesian people and another. That most reliable and intimate friend of the Maoris, Mr. Elsdon Best, makes in his *Lore of the Whare-Kohanga* (nest house) the following significant remarks: "Among native women giving birth is by no means the ordeal that it is to European women. It is surprising to white people to note how little fuss the former make over the matter, and how little it affects them in regard to the performance of their various labours. I have seen a woman go aside into the bush, alone, and shortly after return with her new-born child, washed and wrapped up in one of her garments. A woman here went into the bush one day to procure firewood, and returned with a huge bundle of the same slung on her back. She walked into camp and squatted down that she might slip her arms from the swag straps, and so get rid of her burden. As she did so, her child was born. But she never turned a hair. Quickly undoing some hidden tie or button, she allowed one of her garments to slip down and cover the child, thus saving the situation beautifully."

Finally, we must come to the conclusion that there are no solid grounds for citing an increase in infant mortality and the alleged unskilled native midwifery, as either causes or indications of the decline or degeneracy of native races.

VI

THE INFLUENCE OF MISCEGENATION AND OF INBREEDING UPON ADAPTABILITY

I

The Alleged Influence of Inbreeding and Consanguineous Marriages

THE old view that close inbreeding must necessarily be conducive to degeneracy or decline, although increasingly discredited by scientific and empirical facts, still receives a measure of popular support. There are, however, abundant facts to show that the closest inbreeding is compatible with the continued, and even the increased, vigour of a stock.

Nevertheless, inbreeding has frequently been, and still is occasionally, cited as a potent cause of the decline or decadence of Pacific races. Judge Fenton, for instance, in seeking to account for the decrease of the Maori population, after mentioning the supposed deleterious effects of the introduction of putrid corn as a food staple which first came into use about 1830, attaches most importance to the inbreeding of the population for the previous twenty generations, although according to his estimates the population only started to decrease from the year 1830. Inbreeding he considered to be the cause of the high rate of sterility among Maori women. He estimated the ratio of barren to productive women to be at the time he wrote (1859) as 1 to 2·86.¹ Newman, also, at a later date, attributed this sterility to inbreeding.² Meade expressed a similar opinion.³ The Rev. W. J. Durrad suggests that the stamina of the Melanesian peoples will continue to suffer in proportion as they tend to practise close intermarriage, although in the same volume of essays Dr. Rivers refutes the frequent suggestion that consanguineous marriages contribute in any way to decadence.⁴

¹ Fenton, *op. cit.*, p. 41.

² Newman, *op. cit.*, p. 472.

³ Meade, *Ride through the Disturbed Districts of New Zealand*, p. 168.

⁴ *Essays on Depopulation of Melanesia*, pp. 20, 88.

Commenting on replies received in answer to the Colonial Office circulars on the subject of the supposed effects of consanguineous marriages, the Commissioners appointed to report on Fijian Depopulation remark: "Some of the correspondents who regard inbreeding as the principal cause of the decrease of the native population appear to hold that opinion more positively and exclusively than do the advocates of the other theories advanced."

It is perhaps curious that this prevalent, superstition that inbreeding must necessarily cause degeneracy should so frequently be advanced to account for the decline of populations witnessed since the arrival of Europeans in the Pacific in view of the fact that the influence of European contact is to promote cross-breeding and to break down the more or less rigid segregations of tribal units within the confines of their own restricted district.

The literature on the subject of consanguineous marriages is vast, and has been treated from the biological, the historical, and the ethico-theological aspects. Frequently these different aspects have been confused; a bias derived from one approach to the subject having determined *a priori* assumptions, which have been allowed to prejudice findings in another.

In his classic work Westermarck refers to an enormous literature bearing on the subject from the historical and biological aspects. He cites from a great many sources evidence of marriage customs in which brothers and sisters, parents and children have mated with varying frequency and at different periods in many parts of the world. Instances are drawn from Ancient Egypt, Persia, and Rome, from among German Gypsies, Irish Kings, South American and Central African tribes, occasionally in Polynesia, the Malay Archipelago, and elsewhere.¹

It is noticeable that the custom of contracting incestuous marriages is found most frequently among kingly and chiefly castes, that is to say, among the most select and proudest representatives of their races. According to Westermarck, "there can be little doubt that the consanguineous marriages are carried out in royal families with the aim of maintaining the purity of the royal blood."² Frequently, as in the Ptolemaic brother-sister marriages, there were other motives in the desire to secure the succession to the King's son, and to keep property together in the family when the social organization was based on matrilineal

¹ *Op. cit.*, esp. ii, chap. xix.

² *Ibid.*, ii, chap. xx, p. 202.

affinities. The same applied to the ancient Sumerian civilization. Where in ancient society the imperial power descended through the female line, the heir to a throne is the daughter of a king. So, "to retain a throne a son of a king must marry his sister, or failing a sister, his own mother. In the Sumerian myths we have both circumstances represented."¹ The extent in which the closest inbreeding has been practised all over the world has been much obscured by later ethico-theological prejudices, which have even succeeded in influencing opinions ostensibly based upon biological facts. The attitude of the Egyptians towards incest is stated by Sethe, who says that "the notion of incest in the strong sense in which the Hebrews, Greeks, and Romans understood it and also as Christendom understands it, seems to have been foreign to the Egyptians, at least in ancient times, even if already at that time the people may have avoided marriages between parents and children because of natural feelings and on natural grounds".² Flinders Petrie writes to the same effect: "There was no objection to affinity, which was rather a claim than a bar to marriage. It is still expected in Egypt that a man should marry his uncle's daughter; and Diodoros says, 'It was a law in Egypt, against the custom of all other nations, that brothers and sisters might marry one with another.' In the tale of Setna, it is said, 'If I have no more than these two children, it is right that they should marry one another' . . . We must remember that affinity was no bar in many races, from Persia to Britain. It is only recently and partially in human history that any limitations of person or time or circumstance have affected marriage . . . Regarding father and daughter marriage there are no examples proved in private life, but it seems certain in the case of Sneferu and Ramessu II."³ The crossing of brother and sister, it may

¹ M. A. Murray, "Royal Marriage and Matrilineal Descent" (*Journ. Roy. Anthropol. Inst.*, 45, 1915).

The same motive, that of retaining the royal succession, might also lead to incestuous union between father and daughter (cf. Frazer, *Golden Bough*, abridged ed., p. 332). Ethnographical literature abounds in instances of father and daughter unions. P. A. Erdland reports that in the Marshall Islands a girl of the chief's caste is initiated by the chief himself, even if he happens to be her own father. Congress between tribal father and tribal daughter is reported among the Australian aborigines by Spencer and Gillen (*The Northern Tribes of Central Australia*, p. 138), cf. also, Iwan Bloch, *The Sexual Life of our Time*, p. 138 (Eng. trans.), and H. Fehlinger, *Sexual Life of Primitive People* (Eng. trans.), p. 75.

² K. Sethe, "Das Fehlen des Begriffes der Blutschande bei Alten Ägypten," in *Zeitschrift für Ägyptische Sprache*, 1912 (50).

³ Petrie, *Social Life in Ancient Egypt*, pp. 109-10.

be observed, is much closer than between father and daughter, since in the latter instance he crosses "with only half his own blood".¹

There is a common and prevalent misconception, derived from the idea that there exists in normal people an "instinct" against incest and inbreeding, that the institution of exogamy arose out of a conscious wish, prompted by this "instinctive" abhorrence to prevent, presumably, *abnormal* people from inbreeding, who, but for exogamy or legal prohibitions, would otherwise do so. The corollary to this idea is the supposition that exogamy actually must prevent inbreeding.

Dr. Westermarck appears to have been responsible for giving a lead to, and for sheltering under the authority of his great erudition, a quite unscientific use of the word "instinct" in this connexion. For his theory postulates "the spontaneous appearance of individual variations of the sexual instinct" ² in response to a biological need. He maintains that the psychical cause to which he has traced the origin of exogamy is established by reference to the assumed fact that close inbreeding in the case of animals is, on the whole, injurious to the species; relying, also, on the analogy between in-and-in-breeding in animals and continuous self-fertilization in the case of plants.³ But the facts he produces as evidence of an instinctive sexual aversion to consanguineous matings have no reference to consanguinity at all, but relate, as he himself shows, to "a lack of inclination for, and a feeling of aversion associated with the idea of, sexual intercourse between persons who have lived in a long-continued intimate relationship from a period of life when the action of sexual desire, in its acuter forms at least, is naturally out of the question."⁴ A tendency, moreover, which, so far from being invariable, is frequently overcome by contrary tendencies.

In its technical psychological sense, instinct is only used to describe an innate and inherited prompting or ability (unrelated to experience) to react in definite ways towards an appropriate object or stimulus. But the slowly acquired experience that may have the effect of deadening the efficacy of an object in calling

¹ Cit. Darwin, *Variation of Animals and Plants* (pop. ed.), ii, p. 114. Sheldon is quoted by Westermarck as expressing the opinion that "it seems to be an established fact that the breeding together of parent and progeny is almost always less injurious than that of brother and sister". Westermarck, ii, p. 221.

² Op. cit., ii, p. 236, note 3.

³ Ibid., ii, p. 218.

⁴ Ibid., ii, p. 196.

forth, or of acting as an appropriate stimulus to, an instinct (such as sex instinct), is not itself an instinct, it is an act of discrimination based on a complex of conscious and unconscious experiences and impulses. Secondly, it can be shown that exogamy did not arise from a desire to prevent consanguineous matings, neither need it have that effect. Thirdly, there is a great deal of evidence which disproves the idea of there being any innate horror of incest or of aversion from inbreeding in man; some of this evidence has been referred to, and much more is given by Huth.¹ Fourthly, there is no sufficient evidence to show that inbreeding is harmful of itself, while most authorities are inclined to agree that when inbreeding is coupled with selection it is positively beneficial. Further evidence on these points may briefly be considered.

The frequent references made to the supposed origin of the exogamic system in a desire to prevent close intermarriage and consanguineous matings, as well as the supposition that exogamy does prevent inbreeding, are based on misconceptions of the nature of exogamy and of the dual organization.²

Exogamic marriage taboos, so far from preventing inbreeding and consanguineous marriages, have often had the effect of fostering fairly close inbreeding, as for instance by the custom of cross-cousin marriages, in which the children of a brother and sister are allowed to marry, but not the children of two brothers or two sisters. This form of marriage, which is found frequently among the Melanesians, is according to Rivers derived from the dual organization. The latter gives the following definition of the dual organization:—"In the dual organization the whole population consists of two exogamic groups, which I call moieties, a man of one moiety having to marry a woman of the other. Further, in every case where this form of social organization is known to exist, descent is in the female line, so that a man belongs to the moiety of his mother."³ It follows that in communities so organized, the children of two brothers or two sisters will

¹ A. H. Huth, *The Marriage of Near Kin*.

² These false assumptions are, for instance, implicit in Dr. Speiser's reference to the exogamic system. *Essays on the Depopulation of Melanesia*, p. 35.

³ Quoted by Perry, *op. cit.*, p. 281. As will appear later it is not correct to say that the dual organization does not exist when descent is patrilineal.

Under the dual organization, a man and his father's sister belong to different moieties, and therefore, as far as this system is concerned, are eligible to marry. Although this is usually contrary to present custom. Rivers, *Hist. of Melanesian Soc.*, I, p. 47.

belong to the same moiety, and therefore will not be able to intermarry. But the children of a brother and a sister, belonging to opposite moieties, will be looked upon as the most eligible and appropriate mates.

Cross-cousin marriages and survivals of the dual organization still persist in patrilineal communities, which, however, show clear signs of the transition from mother-right to father-right.¹ These signs of a dual organization are, to give only two examples, found with patrilineal descent among the Fijians and the Mekeo tribes of New Guinea.

The history of the Mekeo tribes in their present habitat starts from the time two closely related tribal offshoots migrating westward settled in close proximity on the left bank of the St. Joseph river.² Each of these tribal groups appears to have consisted originally of two intermarrying exogamic clans (*icupu*). The reciprocal relationship of the two intermarrying groups was known as *ufuapie*. When in the course of time the original clan units grew too large for one settlement they split up into new autonomous units with their own chiefs, though still acknowledging their origin in, and kinship to, the parent clan, and preserving their allegiance to their original clan totem (*iauafangai*). Collectively all clan units having the same totem animal or plant formed *ngopu* groups. The new clan units formed by fission from the parent stocks enter formally into *ufuapie* partnerships with other clan units; in later times they chose for preference clan groups in other villages. Each of the two reciprocating *ufuapie* partners would have different totems (*iauafangai*). Since missionary penetration into the district, the strictness with which the duties of the system were carried out has been much relaxed, but it appears that formerly the men of a clan unit would only have obtained their wives from their *ufuapie* partners, giving back a girl as wife in exchange. Here we have a type of the dual organization, with tribal stocks organized into pairs of reciprocating moieties. There would always be a tendency for individual families in each *ufuapie* clan to exchange their women with each other in succession; bride-prices of the same value in the form of pigs, arm-shells, etc., going to and fro between the two families. It follows that this type of exogamic custom tends to favour a close and continuous inbreeding; which

¹ Cf. *ibid.*, p. 247.

² Further details are given in Chap. XI, p. 201, *infra*.

may be as close or closer (as regards consanguinity) as if the clan unit married endogamously instead of exogamously. Moreover, another fact shows that the aversion to violating the totemic marriage taboo placed upon marriage within the clan can have nothing to do with any horror of consanguineous intercourse, since in Mekeo extra-nuptial sexual intercourse is only tolerated between boys and girls, or for that matter between married men and girls, belonging to the same clan unit. It is not taken seriously, for the very reason that since they both belong to the same *icupu* and are regarded as clan brothers and sisters, they cannot marry, therefore "they are but amusing each other", whereas a man belonging to a clan which would enable him legitimately to marry a girl would not be allowed access to her unless he had paid the bride-price. If he succeeded in doing so without negotiating for a bride, it would be looked upon as theft.¹ It may be mentioned that physically the Mekeo natives are about the finest and best developed of any in New Guinea.

All available evidence relating to the biological effects of inbreeding and of cousin-marriages, where this is the custom of a people or of a superior or kingly caste, go to prove, as we shall see presently, that inbreeding, provided there is some motive and ideal of selection in mating, such as the wish to maintain the purity or intactness of a superior caste, is positively beneficial and not the reverse.

It might be expected that investigations conducted among people where cousin-marriages are discouraged under the impression that they are injurious and where marriage between blood-relatives is prohibited would be likely to show a higher incidence of morbidity for the simple reason that the less prudent, responsible or idealistic elements in the population would be most liable to contract marriages that are supposed to beget weak or degenerate children, and only those totally irresponsible and mentally incapable are likely to violate the stringent laws against incest and to court the social ostracism involved by doing so. Furthermore, since inbreeding must reinforce and intensify defects as well as desirable qualities, particularly in modern European populations, which show such a high incidence of congenital defect and morbidity owing to the dysgenic selection brought about by humanitarian precautions

¹ This view I learned from both Roro and Mekeo natives. It is also confirmed by Dr. Seligman, *The Melanesians of British New Guinea*, p. 365.

to preserve the "unfit", inbreeding *without a rigorous regard to mental and physical vigour* must by the law of averages tend to perpetuate defects to a greater extent than good qualities. These reasons, or any one of them, would account for the comparatively greater frequency with which idiots, lunatics, epileptics, and deaf-mutes occur among the children of closely related parents according to some of the authorities quoted by Westermarck.¹

In spite of all these facts, it is remarkable that investigations conducted into the effects of first cousin matings and consanguinity in European countries should produce so little evidence of ill effects. For instance, G. H. Darwin, as the result of his well-known investigation into marriage between first cousins in England, could not find evidence that the marriage of first cousins had "any effect in the production of infertility, deaf-mutism, insanity, or idiocy, but he observed a slightly lowered vitality amongst the offspring of first cousins and a somewhat higher death-rate than amongst the families of non-consanguineous marriages."² It is worth noticing in this connexion that according to G. H. Darwin the incidence of cousin-marriages is highest among the aristocracy, probably $4\frac{1}{2}$ per cent; among the upper middle classes and landed gentry, $3\frac{1}{2}$ per cent; but in London, comprising all classes, only about $1\frac{1}{2}$ per cent. Now these four classes show a differential survival rate in favour of the whole population, the survival rate increasing down the social scale. It is, therefore, not improbable that the "slightly lowered vitality" of the relatively most inbred groups is accounted for by environmental changes unfavourable to the higher social classes. At the same time, an inbred stock is less adaptable to a changing environment, though better adapted to a stable one.

If, moreover, it can be shown that in communities existing under conditions in which natural selection operates in favour of the healthiest types and so as to eliminate the weaklings—which is the normal condition of the uncivilized and perhaps of most non-European races—the higher or more select classes are at the same time often more inbred and yet maintain a higher physical standard than the general population, the fact will become apparent that inbreeding will operate beneficially in a population

¹ Westermarck, *op. cit.*, ii, pp. 225-36.

² Westermarck, pp. 226, 235, quotes Darwin's figures as evidence that inbreeding is harmful. Most students consider they prove the opposite; while Crawley, *The Mystic Rose*, p. 444, considers they leave the question undecided.

in which selection is eugenic, whilst it may operate deleteriously in a population in which selection is dysgenic.

All Dr. Westermarck's reasoning has led him to suppose the opposite, thus he says, "We may perhaps suppose that consanguineous marriages are more injurious in savage regions, where the struggle for existence is often very severe, than they have proved to be in civilized society, especially as it is among the well-to-do classes that such marriages occur most frequently."¹

Many facts have been cited which lead to precisely the opposite conclusion, but we may now consider one further example of a "savage" society in which the chiefly caste maintained itself by a closer system of inbreeding than the general population, and by the objective standards applied to it were proved by this means to have achieved a superior viability and physical standard. I refer to the often-quoted inquiry undertaken into the effects of cross-cousin marriages among the Fijians by Sir Basil Thomson² and by the Commission appointed to investigate the decrease of the Native Population of Fiji.

Since Dr. Westermarck depreciates the significance of this inquiry on the ground that the figures are too small, and the conclusion being, apparently, equally incompatible with the anticipations of the Commissioners, the most salient of the actual figures of the report may be quoted.

Among the Fijians cross-cousin marriage was extensively practised, particularly by the chiefs, who were, as elsewhere, more inbred than the commoners. Chiefs more invariably married their near relatives, in conformity with tribal custom and with a view to keeping their blood pure.

A Fijian described his relationship to his first cousin who was the child of his mother's brother or of his father's sister by the word *veidavolani*, literally translated as "concubitous". Cousins who were *veidavolani* to each other were expected to intermarry, but cousins who were the children of two brothers or two sisters were prohibited from marrying.

From a census of twelve villages comprising 448 families taken for the express purpose of providing data for the Commission to determine the results of consanguineous marriages upon the offspring, the following results (amongst others) were obtained.

¹ Westermarck, *op. cit.*, ii, p. 235.

² Thomson, *Journ. Anthropol. Inst.*, xxiv, 383 et seq.

For the purpose of the enumeration the inhabitants were divided into four classes :—

- (1) *Veidavolani*—first cousins who had married together.
- (2) Relations other than *veidavolani*, the majority being more distantly related, who had intermarried.
- (3) Natives of the same village, not otherwise related, who had intermarried.
- (4) Unrelated natives of different villages, who had intermarried.

These four groups were distributed as follows :—

(1)	133 families or	29.7	per cent.	who had	438	children born to them.
(2)	55	..	12.3	..	168
(3)	144	..	32.1	..	390
(4)	116	..	25.9	..	321

Thus the average number of children born to each family of the respective classes were :—

- (1) *Veidavolani*, 3.30 ;
- (2) Other relations, 3.06 ;
- (3) Villagers, 2.71 ;
- (4) Natives of different villages, 2.77.

The most closely inbred *veidavolani* are therefore greatly superior in fertility to the other classes.

The comparative vitality as computed from the survival rate of the offspring of these four classes gave the following rate of survival per family according to class :—

- (1) *Veidavolani*, 1.74.
- (2) Other relations, 1.31.
- (3) Villagers, 1.47.
- (4) Natives of different villages, 1.41.

Here again the *veidavolani* head the categories in point of survival rate.

It was also shown that no class of the population replaced itself by the surviving children of the marriage, but that the class which most nearly did so was that of the *veidavolani*.

Many other interesting facts are given in this report, for reference to which the document must be consulted. But whatever other deductions we may choose to draw from them, it remains conclusively established that consanguineous marriages have in no way contributed to the Fijian decrease or decadence. This conclusion is fully admitted in the Report : " In every respect the

veidavolani appears to be the most satisfactory marriage class. They amount to only 29·7 per cent of the population. But they bear 33·3 per cent of the children born ; they rear 34·2 per cent of the children reared ; and including stepchildren they rear 34·7 of the children who survive. We must admit we did not anticipate this favourable predominance on the part of the *veidavolani*."

It is interesting to compare these results, to the limited extent in which they are comparable, with those that may be obtained from a scrutiny of Red Indian vital statistics.

Table IV in Appendix 2 shows that the sterility rate is lowest where the blood mixture (White, Negro, and Indian) is greatest. Heterosis, or hybrid vigour, may in a large measure account for this. The initial hybrid vigour or heterosis arising out of the crossing of widely different racial stocks in mankind such as crosses between negro and white is confined very largely, sometimes entirely, to the first hybrid generation, tending to be lost in subsequent generations. On the other hand, the number of women per centum bearing no children is considerably higher (16·6) among inter-tribal marriages than when husband and wife belong to the same tribe (10·4). In Table V we find that the same order is maintained in computing the number surviving per cent of children born. A larger percentage of children born survive when husband and wife belong to the same tribe than when they belong to different tribes. The most purely full-blooded tribe, the Navaho, shows the highest number of surviving children per cent of total born of any other tribes and including mixed bloods—Tables VII and I.

Jewish statistics may provide one further instance tending to illustrate the groundlessness of the assumption that cross-breeding necessarily tends to invigorate a stock or promote its increase. Much has been said about inbreeding among the Jews. According to statistical evidence the number of children resulting from intermarriages is considerably smaller than from pure Jewish marriages. The purely Jewish marriages average between three and four compared to only about one child to a mixed marriage. Various reasons have been given by Rupp in Conrad's *Jahrbucher* for 1922 to show that the comparison is somewhat deceptive. It is doubtful whether there are other reasons adequate to account for the very great contrast, though the contrast may quite probably be enhanced if the bulk of the marriages outside

the Jewish faith are contracted at more advanced ages than the average within. It may also be affected by a difference in social class; those marrying outside the Jewish religion being generally of a somewhat higher social standing, belonging to classes which have, on the average fewer children.¹

The effect of inbreeding upon domestic animals and plants has been studied very much more thoroughly than its effects upon man. Every stockbreeder has had recourse to inbreeding and culling to a greater or lesser extent in producing his prize stock. The opinion based on experience of the best-informed breeders of the day is generally strongly favourable to intensive inbreeding.

No domestic breed illustrates these principles better than the modern racehorse. Every racehorse of to-day contains in his table the whole of nine select mares out of about one hundred original tap roots, either direct or through collateral branches some distance back. According to Bruce Lowe, the originator of the "figure system" of classifying, identifying, and tracing the origin of the female lines of winning racehorse families, "Some of the branches of these choice families must be represented within the three top removes, and in proportion to the amount of inbreeding to these few choice families will be the measure of vitality contained in the individual—other conditions, of course, being equal . . . All the great sires of the world from Eclipse to the present day either descend directly from five families² or are inbred closely to them—and horses not in these families (or inbred closely to them) are powerless to sire winners, unless the sire element is strong in their mates."³ Perhaps the factor of prepotency, believed to be increased by inbreeding, is also involved.

Darwin, who conducted his experiments before the real influence of heterosis was understood by modern biologists, came to the conclusion that continuous in-and-in-breeding would *per se* eventually result in diminished constitutional vigour, size, and fertility of the offspring. On these grounds he was inclined to believe it to be a general law of nature that "no organic being

¹ Cf. *The Jewish Encyclopædia*, vol. vi, Art. on Intermarriage, p. 612; also W. M. Feldman, *The Jewish Child*, pp. 91, 92, 96.

² The five families were allotted figures according to the number of classic winners they have produced. They were: the dam of the Two True Blues; Bustler Mare (dam of Byerly Turk mare); Sedbury Royal mare; a Royal Mare (Montagu mare); and the Oldfield Mare.

³ *Breeding Racehorses by the Figure System*, p. 5.

fertilizes itself for a perpetuity of generations ; but that a cross with another individual is occasionally—perhaps at long intervals of time—indispensable.”¹

East and Jones, who set out the present position of scientific thought on this subject, amend the Darwinian axiom “ Nature abhors perpetual self-fertilization ” by “ Nature discovered a great advantage in an occasional cross-fertilization ”. The most recent fruits of biological research lead them finally to this conclusion. “ Perhaps it is not wise even to maintain the impossibility of injury to any strain of any species through inbreeding *per se*, but it is proper to say that the evidence in favour of it is practically *nil*.” Extended and controlled experiments indicate “ that the results of inbreeding depend more upon the genetic composition of the individuals subjected to inbreeding rather than upon any pernicious influence inherent in the process itself. It is a wholly indifferent matter whether inbreeding results injuriously through the inheritance received, or whether consanguinity is responsible.”² In fact these authors maintain that the only demonstrable effect of inbreeding on organisms subjected to its action is the isolation of homozygous types.³

There would seem to be ample justification, then, for the view that an occasional cross followed by a long continued period of close inbreeding has been the history of every successful breeding experiment, whether in man or the lower animals. For it is no mere idle prejudice based on an absence of biological facts that recognizes the highest cultures and the most highly developed intellectual types that the world has known from Egypt to Athens and from Athens to modern Europe as the products of select and inbred races or of select and inbred families.

At any rate, we have reviewed sufficient data to enable us to regard the following conclusions as established.

(1) Marriages between near relatives, wholly by reason of their consanguinity and regardless of the inheritance received, cannot be proved to affect the offspring adversely.

(2) The institution of exogamy did not arise out of a conscious

¹ Darwin, *Origin of Species* (ed. 1897), pp. 71, 235 ; and *Variation of Plants and Animals* (pop. ed.), ii, p. 169.

² East and Jones, *op. cit.*, pp. 33, 105, 113.

³ *Ibid.*, p. 137. Heterozygous and homozygous types are terms used in Mendelism distinguishing the characters of hybrid offspring which transmit in definite proportions a mixture of both impure and pure characters from the characters of organisms which, when mated together, breed true. For a discussion of these terms, see Ruggles Gates, *Heredity and Eugenics*, pp. 11, 192, 193.

desire to prevent incest or close inbreeding, neither has this institution invariably, nor even generally, had this result.

(3) The dread and abhorrence of incest or of consanguineous marriages is not found at all times and in all places, neither when it does appear could it have had its origin in a supposed instinct of the human species.

(4) Dread and abhorrence of incest or of consanguineous marriages are of the same nature as the fear of violating any taboo or religious prohibition. Fear of supernatural consequences may be, and often is, rationalized by us as the fear of incurring harmful natural consequences, even when the latter may have no existence. This leaves out of the question what the origin of the incest taboo or of exogamy actually was. Some investigators have found them in a gradual historical evolution arising out of the dual organization. It is held that at first the two moieties into which communities were divided were exogamous, the moieties later became subdivided into a classificatory system of totemic clans, which eventually themselves became exogamic.¹ The exogamy of blood relatives only being, in all probability, the last stage of the process.

This by no means traces these institutions to their original source, since a long evolution antedates the first appearance of the dual organization; neither are investigators all satisfied that a local and historical evolution, which may have led to the first appearance of the dual organization of the archaic civilization in Egypt, is alone adequate to account for the extensive practice of exogamy in various forms in almost every part of the world. The little that is actually known of the origin of exogamy does not appear sufficient to rule out the part that the sexual exclusiveness of the older males may have had in favouring the inception of some type of primitive exogamy or in preserving exogamic institutions in different forms at many different stages of marriage evolution. As Freud points out in this connexion, the first restrictions brought about by the dual organization, and mother kin, while they prevented incest between brothers and sisters, placed no limit upon the sexual freedom of the father so as to prevent incest between him and his daughters.² Freud claims that the widespread, though not universal, dread of incest and in

¹ On this point Frazer, Rivers, and Elliot Smith, in spite of other differences, are all agreed.

² *Totem and Taboo*, p. 202.

a milder degree of consanguinity has its origin in a repressed and unconscious incest wish. The usual strength of the abhorrence out of all proportion to any rational cause for it, suggests that it is over-compensated, that is to say, it is an inversion pointing to the frequency with which incest wishes are present in the individual unconscious. This view, according to Freud, finds corroboration in psycho-analytical practice.

Whichever view of the origin of incest prohibitions we may prefer, there seems little room for doubt that our *dread of its consequences* derives from a purely religious or superstitious source. Notwithstanding the rational claims we may choose to make in accounting for the social organization of our civilization, there are no departments of our activity more hedged about by superstitious taboos nor so ill regulated as those of sex, marriage, and reproduction. "The belief in the injurious results of inbreeding is of religious origin, and parallel to the belief that sickness is due to sin or violation of taboo," writes Crawley.¹ And this conclusion appears to be unavoidable.

¹ *The Mystic Rose*, p. 447.

VII

MISCEGENATION AND INBREEDING (*continued*)

2

Race-Mixture and Adaptation

WE have reviewed some of the facts which show that although marriage systems in every part of the pagan world, particularly among chieftain castes, involves a high measure of inbreeding, there are no grounds for attributing any ill effects to this practice, but that, on the contrary, the finer physical types found among the chieftainly castes tend to be more closely inbred than the others. We have still to consider, briefly, the inverse influence of outbreeding and miscegenation upon the adaptability of a race.

The problem presented by the decline or expansion of the more primitive peoples under European control has here been defined as that of variations in racial adaptability to changed environmental conditions.

An analysis of population tendencies in the Pacific will show that the more specialized a people become through segregation, inbreeding, and the agency of selection, the more closely adapted they are to their psycho-physical environment (i.e. to the culture-forms and living conditions they have evolved or adapted to their own needs) and the less adapted to any drastic change in environmental conditions. Psychological and physical factors interact and constitute the determining conditions of the environmental complex, whose effects can be traced in the survival or elimination of ethnic groups distinguishable in the population of a region. Dr. Shirokogoroff has recently called attention to this fact. Briefly summarized, he shows that variation of some aspects of the cultural complex is followed by variation in the whole complex and entails a period of cultural disequilibrium. Physical degeneracy may be either a process of extinction or a substitution of one anthropological type for another; in both cases there is ethnical disequilibrium.¹

¹ "Ethnical Unit and Milieu," 1924, being a translation of part of his *Ethnos* (1923) in Russian.

Darwin recognized, though in rather vague terms, that miscegenation might bring about a readaptation of a population, although he does not clearly distinguish between the immunization of a population and of a race. He wrote: "It appears that a cross with civilized races at once gives to an aboriginal race an immunity from the evil consequences of changed conditions."¹

So long as the decline of race and the decline of population are confused the facts will never be clearly recognized. The infiltration of alien stock may check the decline of the total population, while, at the same time, the racial elements of the original population continue to decline. That is to say, races die out in localities where the populations are actually increasing. If, however, we are able to distinguish the different ethnic elements in a population, the whole of which may be, and probably are, subject to the same environmental factors, we discover that the unmixed racial elements that formerly thrived under the old environmental conditions are disappearing as the new or miscegenated elements are surviving in increasing numbers. Thus, in the process of an adaptable population gradually being substituted for an unadaptable population a "race" becomes extinct. The effect of outbreeding or mixing has here stimulated population growth, not because outbreeding is *per se* more favourable to survival than *inbreeding*, but because outbreeding has been the means of introducing a new racial element in the mixed stock more adaptable to new conditions of environment, the new miscegenated stock becoming more generalized by the gradual infiltration of foreign blood also becomes better adapted. But the mixed-blood stock would not have competed favourably for survival with the full-blood stock unless the old conditions adapted to the needs of the specialized stock had changed. As an illustration of this might be mentioned the superior survival-value of the more inbred elements among the Navaho Indians, themselves the most free of alien blood of all the North American Indians, whose nomadic life and environmental conditions in Arizona have been least affected by European contact.²

This process of population substitution, in which the infiltration of a new blood element enables the miscegenated population to replace gradually the old full-blood stock is well illustrated by an analysis of the Maori population from the period

¹ *Descent of Man*, pp. 295-6.

² See Appendix II, Table VII, p. 289.

of their contact with Europeans. The picture presented by an analysis of this population may be accepted as a type of the substitutions that have taken place in many parts of the Pacific, and is chosen as a convenient illustration of a world-wide process.¹

Where the aboriginal population fails to mix its blood sufficiently with the immigrant invaders its extinction is more evident and has the appearance of being more rapid.²

The looseness with which the term "race" is used still helps to obscure the processes of race extinction and substitution that are taking place wherever races or ethnic groups are not segregated or endogamous. "C'est par un vice de langage, qui a causé les plus grand maux à l'humanité," observes Comte de Laponge, "que le nom de race a été donné aussi à des groupements humain caractérisés par une certaine communauté de langues, de religions et de coutumes."³ Mr. Hocart protests that the confusion which used to exist in the use of the words Aryan, Indo-European, Celtic, etc., which were applied to languages or groups of languages as well as to the people who spoke them, still prevails to a great extent in the use of other ethnic terms such as Melanesian; we speak of a Melanesian race, found chiefly in the islands of Melanesia, and also of Melanesian languages, but all Melanesian-speaking people do not belong to the Melanesian group of races, and all Melanesians do not speak Melanesian tongues; while it is probable that the so-called Melanesian type originally adopted its languages from a proto-Malayo-Polynesian people.⁴

European national and political prejudices continue to stereotype the habitual false use of ethnic terms and their confusion with linguistic terms by speaking of Anglo-Saxon, Celtic, Latin, and, even more absurdly, of British races. By so doing matters of vital racial and biological importance are obscured. In Australia, for instance, this confusion is very prone to be

¹ See Appendix I, p. 279.

² The comparative paucity of Tasmanian and Australian half-breeds, and the reasons for it have often been discussed; the Australian gin's tendency to kill her mixed-blood offspring generally being the attributed reason. Cf. Huth's *Marriage of Near-Kin*, 2nd ed., p. 299. See also Westermarck, ii, pp. 43-4, footnote 3, in which he remarks, "As to the scarcity of mongrels in certain parts of Australia it should be noticed that half-caste children are very frequently destroyed by the natives." In support of this assertion he refers to the evidence of Eyre, Henderson, Curr, Lumholtz, Roth, Darwin, Peschel, Meyer, and Japlin.

³ *La Race chez les populations mélangées*, vol. ii of the Second International Congress of Eugenics.

⁴ *Journ. R. Anthropol. Inst.*, vol. lili, p. 472.

encouraged and perpetuated in the interests of what is called the "White Australia policy", which, mainly for political and economic reasons, aims at excluding Asiatics from any part of the Commonwealth. In order to defend this exclusiveness on the grounds that it proceeds from a racial desire for self-preservation (a sound enough reason, if only it proceeded from a true racial consciousness and understanding), two phantastic fictions are invented, and their alleged truth defended with religious zeal; one being that the population of Australia is 98 per cent "British by race", and the other that this supposed "British white race" is as adaptable and survives as easily in the tropical as in the southern parts of Australia.

Under the inspiration of the "White Australia" crusade, the most meaningless nonsense is solemnly propounded. An instance typical of this was contained in a sub-leading article published in a well-known Sydney daily paper, headed "The Australian Type". Its readers were assured that the "typically British racial nature of the Australian people" was not "seriously impaired" by the flow into that country of Maltese or Italian immigrants. This assurance it gained from the statistician's returns, which showed that 98 per cent of the population was "British by race", 85 per cent being "actually native to Australia".¹ Furthermore, "experience showed that the 'crucible' was working so well in Australia that in a generation or two the foreign element becomes inextricably blended with the British stock. The result of the British stock interblending so freely was that the average Australian could boast with a good deal of accuracy (*sic*!) that he is more British than the Briton himself."² Such a *naïf* and trusting use of the word accuracy might well preclude further attempt to derive any meaning from such an utterance. Yet this sort of language is so constantly being used that one is tempted to ask: "What is it intended to mean?" Presumably it implies a belief (1) in the existence of some race called the "British race," and (2) that the more freely races

¹ According to the 1911 Census, the population was actually made up as follows: Out of a total population of 4,424,585, 82.9 per cent, or 3,667,670, were Australian born. Of the remainder 13.35 per cent migrated from the United Kingdom and 0.72 from New Zealand. Thus 96.97 per cent of total population were Australasian, or from the United Kingdom. The foreign immigrants were composed as follows: Germany, 0.75 per cent; China, 0.47 per cent; Scandinavia, 0.23 per cent; India, 0.15 per cent; U.S.A., 0.15 per cent; Italy, 0.15 per cent. Since 1910, there has been no very considerable difference in the quota of foreign immigrants. (*Official Year Book*, No. 14, pp. 1,128 et seq.)

² *Evening News*, Sydney, 7th July, 1924.

which it recognizes as non-British mix with the race it calls British, the more the latter becomes itself or British ! Of more significance, however, is the illustration it provides of the absence of any real race-consciousness among European peoples and their ignorance of, or indifference to, the problem of miscegenation.

When we speak of race-types in Britain "we are not thinking", according to Professor Fleure, "of breeds, which have kept separate since they evolved in the far-distant past. We are really thinking of groups of associated characters, which are frequently handed in one lot together from one generation to another. They may remain or reappear in after ages to give us evidence of elements which long ago entered into the mixture which is continually resorting and remixing as the generations pass. Moreover, the process of modification probably goes steadily on, and one seems to note changes in the facial form (cheek-bones, jaws, nose, changes following palatal regression) . . . Partly through the continuous handing on of characters, partly through movements of populations which have skimmed off again various newer elements in the physique of the British people, there can be little doubt that a great part of the physical inheritance of a great proportion of the present population of the country is derived from its pre-Roman inhabitants, who were already of many breeds established side by side."¹

The question "Who do we mean by Britons?" is not an easy one to answer, for the word "Britons" describes no present race of people, but includes representatives of many dissimilar races of immigrants from the earliest times to the present.

Though there are many gaps in our knowledge it seems to be agreed that as the ice cap receded from what are now the British Isles at the end of the third glaciation, the first immigrants were probably short, long-headed brunettes. The Piltdown skull found in Sussex gives us our earliest indication of the first population. The next types that we come across in England with the advent of Neolithic times were the Long Barrow races, also short and long-skulled. Representatives of these types are still found in many parts of the British Isles. Then came the brunette, broad-headed, Round Barrow races, migrating, it is supposed, from Asia. These round-headed invaders, coming in successive waves from Asia, overspread Europe and submerged the earlier races; these round-heads are associated at one period with a

¹ Fleure, *The Races of England and Wales*, pp. 17-20.

bronze culture. After the termination of the Roman occupation, which must have left its traces in our population, we are next introduced to the tall, blond, long-headed, light-eyed invaders from the North, who are supposed to have evolved in Scandinavia and all round the Baltic. These Nordics, as they are called, likewise spread all over Europe, finally establishing their type most thoroughly in Great Britain and Northern Europe; and elsewhere imposing themselves as leaders and aristocracies. The successive invaders of England, Celts, Jutes, Angles, Saxons, Danes, and Normans, were either wholly or predominantly of this same blond Nordic stock. The Celts or Gaelic-speaking people and the Teutons were essentially of the same root blond stock which forced their Aryan languages upon the dark Long Barrow and Round Barrow races. Brunette types that are now found most commonly in Cornwall, in the Welsh mountains, or in Connemarra and Kerry in the West of Ireland, derive their darkness from these stone age ancestors. Celtic, Teuton, and Aryan are, of course, the names of language groups, not of races.

The three chief racial stocks recognized by anthropologists, who in various proportions populate every country in Europe are called Nordic, Mediterranean, and Alpine.

For generations England has been an asylum for immigrants from all over Europe. The industrial revolution brought about a tremendous increase in population and encouraged an increasing flow of migrants. The progress of industrialism, together with the dominant influence of that curious combination of commercialism, sentimentalism, and pious belief that things are for ever necessarily getting better and must come right in the end, which in Europe is called Liberalism, caused England to welcome indiscriminately all migrants who sought admission, though as time went on these were increasingly recruited from the most impoverished classes, economically, physically, and mentally, of the Mediterranean and Alpine stocks.

So we see that the population of the British Isles and also in a lesser degree that of Australia, though possibly (perhaps doubtfully) still predominantly Nordic, also contains a large proportion of Mediterranean type, and a lesser infiltration of Alpines, as well as representatives of other and earlier stocks. The whole time the psycho-physical environment operating through the processes of selection and of mingling is favouring some types, submerging others, and producing mixed types. It

forms an interesting calculation to discover which racial types are vanishing quickest and which are surviving. I believe there is practically no doubt (on this point I think all authorities are agreed) that the stock that is disappearing fastest and giving place to other stocks is the blond Nordic¹—the type, in fact, that is probably most commonly thought of when people speak of the "English" or "Anglo-Saxon" race, and the type that is represented in England and Scotland to a greater extent among the upper and middle social classes and in the rural districts. The blond race is a vanishing race. Quatrefages mentions the diminution of blond types in Normandy, Schaafhausen observed it in Germany; Lenz in Scandinavia and Europe generally²; Munro,³ Shruballs,⁴ Havelock Ellis,⁵ and others in England, Maddison Grant,⁶ Woodruff,⁷ and other writers in the United States.

In Australia the elimination of Nordic types in favour of brunette types is probably proceeding at a faster rate even than in England, not merely owing to the rate of Mediterranean immigration and the Australian trend towards urban-industrialism to which Nordic stocks appear less adaptable, but partly owing to the selective agency inimical to blond types of the tropical or semi-tropical climate of a large part of Australia.

According to recent findings of medical ethnology, it appears to have been established that blonds suffer most from the deleterious effects of tropical light. White-skinned people are not less fitted to resist heat and moisture, but have less protection against the short rays than black or dark-skinned people. The value of skin pigment is in its function of screening out ultra-violet rays and thereby guarding against their lethal effects. Also black bodies radiate heat to lighter ones much faster than bright ones do, so that the white man, particularly the wife and child of

¹ The generally accepted criteria of the Nordic stock are given as: High stature, long or medium-long skull, uniform face, vertical profile, narrow high nose, light complexion, heavy beard, blue or light brown eyes, blond or light brown hair. I am here following Jon Alfred Mjøen of Norway, *International Congress of Eugenics*, vol. ii, p. 43.

² Lenz, "Why the Nordic Race is going backward," in *Den Nordiske Race*, 1923, No. 2.

³ Munro, *The Races of Great Britain*.

⁴ Shruballs, *Proc. Brit. Ass.*, 1904.

⁵ Ellis, H., *Man and Woman*.

⁶ Grant, M., *The Passing of the Great Race*.

⁷ Woodruff, C. E., *Medical Ethnology*, 1915.

the light-eyed blond, suffers in the tropics from overheating owing to his inability to radiate heat.¹

However, it is outside my province to say with regard to this thorny question whether white, or more particularly blond, races are physically capable of establishing their type in the tropics; the past certainly suggests that they are not. But we are all on much safer ground when we are considering what actually is or is not happening. We may be content, then, merely to maintain that it so happens Australia is not becoming more, but, on the contrary, less blond, and white races are not now establishing themselves in the tropics either of Australia or of other parts of the world.²

If in spite of the existence of a keen desire to believe otherwise recent research tends to confirm the soundness of one of Tylor's generalizations: "Races, though capable of gradual acclimatizations, must not change too suddenly the climate they are adapted to. With this adaptation to particular climates the complexion has much to do, fitting the negro for the tropics and the fair white for the temperate zone; though, indeed, colour does not always vary with climate as where in America the brown race extends through hot and cold regions alike. Fitness for a special climate, being a matter of life and death to a race, must be reckoned among the chief of race-characters."³ There are,

¹ Of course the law of absorption being the reverse of that of radiation, the dark-skinned man absorbs heat more rapidly than the light-skinned man; so that white boiler-makers and stokers suffer less exhaustion than blacks under the same extremes of moist heat from furnaces, etc. Ref. Woodruff, *Medical Ethnology*.

² We get some indication of the distribution, incidence, and survival rates of blond types in Australia within which range the Nordic stock must be located by such admittedly inadequate and unsystematically recorded estimates we possess of the eye-colour and hair-colour of Australian school children.

In the country districts of New South Wales in 1909, out of 3,574 school children, 842 or 23 per cent were blonds, 57 per cent being returned as medium, and 20 per cent as dark. (*N.S.W. Education Report*, 1910, p. 18.)

In South Australia, the highest percentage of dark eyes was found in Adelaide. (1909, Dr. R. S. Rogers' *Report on 1,007 children*, p. 46.)

In Victoria (1913-14 *Educational Report*, p. 107) the percentage of light eyes was much greater in the country districts, 43 per cent, than in the metropolitan districts and industrial suburbs, 33 per cent. Out of 168 children of immigrants, 50 per cent were light-eyed.

This suggestion that the incidence of blondness and light eyes is higher among immigrants than natives could only be accounted for by factors favouring the elimination of blonds by a lessened fertility.

In so far as any definite conclusions can be drawn from such scanty data, they appear to confirm the findings of investigators in Europe and America, and to show that blond types tend to become eliminated as they get nearer the tropics and as they migrate to the urban industrial districts, while inversely both warmer latitudes and urban industrial conditions favour brunette types.

³ E. P. Tylor, *Anthropology*, p. 74.

indeed, indications that Southern races become more readily adapted as they move Northwards to colder climates in Europe than blond Northerners do when they move South. Speaking generally, it may be conceded that many coloured races have shown their capacity to become gradually acclimatized to cold latitudes, while fair races have not proved so adaptable when they move to the tropics. This may perhaps be explained on the general grounds that blondness is a later acquired specialization, and therefore less adaptable to modifications of environment than more generalized characters. It being, of course, implicit in the conception of evolution that it proceeds from the generalized and not from the specialized type.¹

It is quite possible, of course, that if we were to take a sufficiently long-visioned view we should regard all races as vanishing races, just as we might have to regard *homo sapiens* as a vanishing race; at any rate, we have no guarantee that mankind itself is not a vanishing species destined eventually to disappear. "Judging from the past," said Darwin, "we may safely infer that not one living species will transmit its unaltered likeness to a very distant futurity. And of the species now living, very few will transmit progeny of any kind to a far distant futurity."²

In summing up the foregoing considerations on the effects of miscegenation and outbreeding on adaptability we are led to the conclusions:—

(1) That miscegenation and outbreeding tend to produce a stock more generalized and therefore more variable in its adaptability than the specialized type it replaces when the latter's cultural or physical equilibrium is disturbed. This may occur either when the specialized types migrate into regions climatically unsuited to them, or when the specialized types suffer an invasion into their territory of alien stocks in sufficient numbers and powerful enough to disturb their cultural and physiological equilibrium, and with whom they mix.

(2) Where the environment is not changed and there is no period of disequilibrium specialized types show superior adaptation to mixed-blood infiltrations. Under these conditions specialized types tend to maintain their special characters by

¹ This remark was first made, I think, by Herbert Spencer, though I cannot find the reference.

² Darwin, *Origin of Species* (6th Edition), p. 402.

segregation and inbreeding. So long as they can maintain their ethnic equilibrium and their specialized characters by blood-segregation they control the cultural complex. For instance, we note that the Roman patricians who directed and controlled the classical culture and the conditions of life before Roman civilization decayed, responding to an impulse we have found amongst all chieftainly castes and culture-directors, were originally averse to mixing their blood with foreigners.¹ But with the gradual adulteration and obliteration of their stock during the Punic and Civil wars by enormous hordes of introduced slaves and immigrants, they became replaced and eliminated, in consequence of which the cultural conditions which they could no longer control changed. No doubt other dysgenic factors contributed to and hastened this end.²

3

Inbreeding and Outbreeding and the Sex-ratio

Much has been said by different investigators about the effects of in- and outbreeding upon the birth sex-ratio, but their conclusions are by no means unanimous or consistent. The very important problem of sex-ratio variation is dealt with at greater length elsewhere, and no more than a brief reference to one aspect of the problem can be made here.

Westermarck, whose conclusions perhaps represent the theory most frequently held, is definitely of opinion that mixture of race produces an excess of female births.³ In support of

¹ Cf. Huth, op. cit., p. 57.

² The factor of hybridization in producing the extinction of the Classical civilizations is discussed by Ruggles Gates in his *Heredity and Eugenics*, pp. 238-9. Dr. Schiller, in his 1925 Galton lecture, prefers to point to other factors of dysgenia selection as contributing to Rome's fall, such as the elimination of the best warrior types in continuous warfare, the effects of unsound economics, etc. *Eugenics Review*, vol. xvii, No. 1. Madison Grant, on the other hand, attributes the decline of Rome entirely to the elimination of the Roman stock. McDougall (in *The Group Mind*) expresses a similar opinion. In this connexion might also be mentioned the opinion of a biologist, Mjœn, who is definitely of the opinion that "disharmonic race crossing" is productive of physical and mental degeneracy. He gives instances of the disappearance of sexual instinct together with other stigma of degeneracy as the result of crossing three widely different races of rabbits. *International Congress of Eugenics*, vol. ii, p. 55.

N.B.—Elsewhere I have summarized the effects of the contact of two dissimilar, but interacting, culture-trends; grouping the possible results according to the characters of the cultures involved into eight different classes. *Cf. Man*, Jan., 1927, No. 2.

³ *History of Human Marriage*, iii, pp. 173 et seq.

this contention he quotes the evidence of investigators among the tribes of California and other parts of the United States, Central and South America, Ceylon, Java, and the Congo. He, at the same time however, admits evidence suggesting the opposite conclusion, viz., that "cross-breeding increases masculinity," and concedes that "these observations certainly confirm the theory that hybridization exercises some influence upon the sex of the offspring, but they also show that it may yield quite opposite results in different cases."¹ Heape, also, is of the opinion that the crossing of races is favourable to the production of a high femininity at birth, though he does not find (op. cit., pp. 294-5) sufficient evidence in the returns of the Cuban population that the increased production of females by the coloured people of Cuba is due to crossing.² Elsewhere, arguing from results obtained from breeding experiments among dogs, the same authority considers that the production of a high percentage of males may be associated with inbreeding.³

On the biological side it is interesting to compare these rather inconsistent conclusions with those of Professors East and Jones, who quote an experiment made by Miss King starting with rats already to some extent closely inbred and in an approximately homozygous condition. From the seventh generation on selection was made for two lines on two different principles of selection. The new-born young were selected in each case. In line A only litters having an excess of males were selected as the progenitors of the succeeding generation, and in line B litters having an excess of females were selected. The authors describe the result of the experiment as follows: "The general result was to show that the normal sex-ratio in this species, 105 males to 100 females, can be changed. At the end of nineteen generations of selection, line A had produced litters having a sex-ratio of 122.3 males to 100 females, and line B had produced litters having a sex-ratio of 81.8 males to 100 females. From these facts there is no doubt but that lines having an hereditary tendency to produce different sex-ratios can be isolated, but there is no evidence whatever in favour

¹ In this connexion Westermarck quotes C. J. and J. Norman Lewis, Doncaster, Whitman, Riddle, and Gache, op. cit., iii, p. 177, note 2.

² Heape, W., "The Proportion of the Sexes produced by White and Coloured Peoples in Cuba," in *Philosophical Transactions Roy. Soc.*, vol. 200 (1907).

³ *Idem.*, "Notes on the Proportion of Sexes in Dogs," *Proc. Camb. Phil. Soc.*, xiv, p. 21 et seq.

of the theory of Düsing proposed in 1883 to the effect that inbreeding by lessening the vitality of the mother increases the percentage of male young. The change in the sex-ratio was made in two generations. After that the effect of selection ceased. Such a result not only militates against attributing the changed ratios to inbreeding itself, but indicates that a relatively small number of Mendelian factors are involved in the control."¹ This indication that a tendency to produce a sex-ratio, which cannot be attributed to inbreeding, either in the direction of a high or low masculinity, can be isolated and transmitted, will be seen to have considerable significance for the sex-ratio theory of my thesis.

At this point mention may be made of Little's "Note on the Human Sex Ratio."² Data is quoted showing that there is a significantly higher male birth sex-ratio among progeny in which parents are of different nationality in New York. The various birth sex-ratios of five categories of matings from a study of New York City Maternity Hospital records are given as under.

	♂	♀	Ratio.
(a) Europ. "pure" . . .	2807	2689	104.54
(b) Europ. "hybrid" . . .	677	551	122.86
(c) U.S. white . . .	994	840	118.33
(d) Brit. W. I. coloured . . .	667	618	107.92
(e) U.S. coloured . . .	695	723	96.12

No very definite conclusions can be drawn from these figures owing to the difficulty of relating these categories to precise ethnic distinctions; such as they are, however, there is a significant difference between the European "pure" (matings of parents both of same national extraction) and European "hybrid" (parents of different nationality), 104.54 to 122.86, and between the former and U.S. white, 118.33. But there is no significant difference between the European "hybrid" and the U.S. white, which, according to Little, suggests that "the U.S. white ratio is essentially that of a hybrid race." The British West Indian stock is close to European pure whites. On the other hand, the U.S. coloured differs significantly from both British West Indian coloured, and from European pure

¹ *Inbreeding and Outbreeding*, p. 106. Cf. also Helen Dean King, "Is Inbreeding Injurious?", *Proc. 2nd International Congress of Eugenics*, 1921, pub. in *Eugenics, Genetics and the Family*, Vol. I (1923).

² Little, C. C., *Proc. Nat. Academy of Sciences, U.S.A.*, vol. vi (1920), pp. 250.

and United States whites. From these results Little makes the inference that hybrid matings show a consistently higher masculinity rate at birth, according to which assumption the "European pure" and the "British West Indian coloured" are categorized as relatively "pure" stock, while the European "hybrid", United States white, and United States coloured are all relatively more hybrid stocks. At any rate the results lend no support to Westermarck's theory that hybridization invariably tends to lower the masculinity of birth sex-ratios, an opinion in which he finds a recent supporter in L. W. G. Malcolm, though I fail to find any evidence in the latter's work to lend colour to the conclusion.¹

An examination of the Tables at the end shows that, so far as the sex-ratio of *total population* is concerned, the more inbred groups when, as among the Navaho, they are maintaining their numbers, tend to show the lower masculinity. (Appendix II, p. 284.) Such data as is obtainable of the Maori population from the time of their first contact with Europeans indicate that the high and increasing masculinity of the total Maori group was arrested by miscegenation which lowered the masculinity, but this is clearly due to the greater adaptability of the miscegenated stock as distinguished from the full-blood stock to changed conditions.²

Little appears to be known about the relation between the birth sex-ratio and the sex-ratio at the reproductive age categories. The latter, which implicates variations in the sex survival rate is of far greater consequence and is certainly more variable. As a rule it is least considered. It is sometimes assumed that the birth sex-ratio is constant for ethnic groups.³ Adequate investigation shows that the secondary (birth) sex-ratio is not invariably constant within ethnic groups. Within a group the birth sex-ratio is not only influenced by ephemeral disturbing features in environmental conditions⁴; it is also affected by factors producing the progressive decline of groups distinguished

¹ Malcolm, L. W. G., "Sex-Ratio in African People," in the *American Anthropologist*, vol. xxvi, No. 4 (1924), p. 464.

² See Appendix I and tables 1-6; also Pitt-Rivers, G., "Variations in Sex-ratios as Indices of Racial Decline," *Proc. 2nd Pan-Pacific Science Congress*; and Buck, P. H., "The Passing of the Maori," *Trans. New Zealand Inst.*, vol. iv.

³ E.g. by Dr. A. S. Parkes, "The Respective Sex-ratios of White and Coloured Races," *Man*, vol. xxiii, No. 97.

⁴ Huxley, J. S., *Eugenics Review*, vol. xlii, p. 549; *ibid.*, *Medical Science*, vol. x, No. 2.

ethnically and in other ways. Miscegenation influences the birth sex-ratio and the sex-survival rate, but apparently, as pointed out, not consistently in the same direction, since miscegenation may either promote adaptation to changes in environment, or, by altering constitutional qualities, render the miscegenated stock less adaptable to an unchanged environment. At the same time these changes in adaptability as measured by survival rate, are reflected in variations in sex-ratios. If it were possible to compute the primary (conception) sex-ratio and so eliminate the factor of differential foetal mortality, the variation would be correspondingly reduced.

VIII POLYGAMY

I

Polygamy and Sex-Ratio

IN every human society the number of males and females born tends to be approximately equal, hence, as Dr. Lowie¹ correctly observes, in order that either polygyny or polyandry can be general in a community, it is necessary that some factor—Lowie says some “non-biological” factor—should disturb the natural ratio. But we have no right to assume from this that a disturbance in the ratio, however caused, will have no biological consequences. It is moreover doubtful whether the factor of differential sex mortality which normally produces a preponderance of males during adult life in most mammalian

ERRATUM.

Page 115, line 10, for “males” read “females”.

In European countries for every 100 still-born females we get an average from 124.6 to 142.2 still-born males. The rate, however, in many countries varies considerably from year to year. In Western Australia, for instance, the excess of male over female still-births per 100 of both sexes fluctuated between 31.45 in 1899, 4.95 in 1908, 26.32 in 1916, 1.83 in 1919, and for one year (1913) out of the twenty-six given, showed an excess of female still-births, viz. a masculinity of *minus* 4.33.² Infant mortality is habitually higher for male than female children, especially during the first four or five years of life. This applies to civilized and savage races alike. There is a longer female than male expectation of life at each decennial age, from birth to forty years, in such different countries as Australia, Denmark, England, France, Germany, Holland, India, Italy, Japan, Norway, Sweden, Switzerland, and the United States. Thus, as already noted, the tertiary or adult sex-ratio is produced by differential

¹ Lowie, R. H., *Primitive Society*.

² Darwin, *Descent of Man*, p. 376.

³ See Appendix VII.

sex elimination which normally favours the females, so that the tertiary sex-ratio is lower than the secondary or birth sex-ratio.

In passing I may observe a point, to which reference will be made later. We shall find grounds for supposing, when we come to examine populations or racial groups that are declining in numbers and dying out, that the process is reversed, and that in such groups the tertiary sex-ratio is higher, not lower, than the secondary sex-ratio. In short the superior survival-value of females, the normal phenomenon of stable or increasing groups, is then changed into superior male survival-value.

The question we are now about to consider is : what surplusage of marriageable women over men is necessary in order to make polygyny, as a generally practised institution in the community, arithmetically possible? Contrary to what appears to be the general supposition, it is not necessary for the marriageable women to outnumber the men of the same ages by two to one in order for it to be possible for every man in the group to look forward with reasonable anticipation to becoming eventually the possessor of at least two wives. This possibility is generally overlooked or denied by those who think that the extent of the practice of polygyny is limited to the sometimes apparently small excess of women over men in a polygynous community. The factor that is usually forgotten is the effect of the differential variation in the nuptial ages of the two sexes. The way in which postponement of the male nuptial age influences the nuptial-age sex-ratio (this I term "the effective mating sex-ratio") necessitates a short explanation.

Among all races a combination of circumstances, usually reflected in their customs, has resulted in producing a male postponement of marriage beyond true male nubility together with the earlier marriage of females.¹ In all countries and at all

¹ The nuptial age at which marriage or permanent mating actually takes place is, of course, distinguished from the nubile age, at which mating *can* take place. Variations in the nuptial age have the effect of further exaggerating the differential sex maturity ordained by nature. Everyone is aware of the familiar fact of the earlier physiological maturity of females, but the amount of variation between the ages of maturity is differently computed ; it is generally held to be about two years. E.g. Dr. Paul Godwin, in *Eugenique*, Tome iii, No. 2, 1922, interpreting maturity as the period subsequent to puberty, when the reproductive organs have attained "adequate functional capacity", a condition indicated by the attainment of normal body weight, and volume in relation to the cranium, considers that true nubility may be reckoned at 20½ years in the male sex, and 18½ in the female sex. Dr. Bauer, on the other hand, states a more usual opinion by holding that maturity in females and true nubility dates from the beginning of mensuration. Cf. his "Woman" (*Wei bist du Weib?*), p. 138.

times there has been a discrepancy in the average marriage age of men and women. The tendency has always been for the male to postpone marriage for a longer period after true nubility than the female. The ideal age for marriage, according to Aristotle, was 19 for the female and 37 for the male. Among the more primitive peoples the difference in the marriage age of males and females tends to be much greater than among modern civilized and industrialized peoples, while there is a tendency among the latter to shorten the difference, which averages from about five to three years. In 1919 in England and Wales the average age for bridegrooms was 29.81, and for brides 27.16. According to Rubin¹ the difference between the age of bride and bridegroom must have been considerably greater in the sixteenth, seventeenth, and eighteenth centuries than in the marriages of our time. It is noticeable that the modern tendency to shorten the difference in the marriage age is achieved by the increase in the marriage age for females to approximate to the male postponement of marriage. According to Godwin, in the Renaissance period in the Latin countries a large proportion of the girls married at 15, and a considerable number at an even earlier age.

Among primitive hunting and agricultural races as well as among Orientals, girls are habitually married soon after puberty,² while the nuptial age for males frequently averages twice or more the nuptial age of the female. A difference of about 7 to 14 years is generally found, e.g. among Polynesian, Melanesian, Mexican, Bantu, Omaha, and Ojebway Indian tribes. Among the Australian aborigines the difference is greater still. In most tribes the men have no chance of acquiring a wife of their own until they attain the age of thirty.³ The Laws of Manu prescribe: "A man, aged thirty years, shall marry a maiden of twelve who pleases him, or a man of twenty-four a girl eight years of age."⁴

¹ Quoted by Carr-Saunders, op. cit., p. 265.

² Cf. *The Institutes of Vishnu*, xxiv: "When a damsel has allowed three monthly periods to pass without being married, let her choose a husband for herself."

³ On this point cf. Malinowski, B., *The Family among Australian Aborigines*, p. 258, et seq.

⁴ *Sacred Books of the East*, vol. xxv, p. 344.

In passing we may refer to the general and almost unchallenged assumption made by Europeans that the child-marriages common among Oriental peoples must necessarily be held responsible for serious physical damage to the women, and adversely affect their future fertility. There appears, however, to be no

Now it should be clear that a consistent discrepancy in the nuptial ages of men and women will influence the ratio of nubile women to marriageable men, and that the discrepancy is greater the greater the male postponement in the nuptial age exceeds the female nuptial age. Even in a group where an equal number of each sex survived to reproductive age and during the years of marriage, but in which the female sex habitually married earlier than the male, the result must be a preponderance of married or marriageable females over males, equivalent to the number of males over the age of the females who have not yet reached the qualified marriageable age.

Since, however, we have to take account of all sexual mating as well as recognized marriages, it would appear that unless all the males remain strictly celibate during the pre-nuptial period a proportion of nubile females, who may have become deflected from marriage in response to the needs of the unmarried men, must be subtracted from the total available for marriage. This factor, it will be seen, affects the true nuptial sex-ratio (in reference to availability) far less than might be supposed. It is likely to make least difference in polygynous countries, and to a slight degree only in European countries practising a nominal monogamy. It should hardly be necessary to labour the point that monogamy, or more strictly monogyny, has never represented the mating system of a whole community, nor has anywhere been found to be more real than nominal.¹

In both monogamous and polygamous countries the unmated men who have not yet obtained wives of their own, call into existence a polyandrous group of women. In polygynous countries where women are invariably more carefully guarded and protected, all women tend to be absorbed in marriage and the percentage who remain permanently polyandrous and unmarried is likely to be extremely small and to consist of those who, for some reason or other, are considered unfit for marriage. Generally among the Melanesians and most other races of Oceania the greatest pre-nuptial licence prevails. This condition has

evidence that child-marriages nor even the custom of pre-nubile intercourse (common among Oceanic peoples) have any physically harmful consequences, and the conviction of its harmfulness is in all probability a superstition arising from the same causes as the demand so passionately advocated in England by sexually dissatisfied women and sexually starved men that the female "age of consent" should again be postponed beyond the age fixed by the existing law.

¹ Ellen Key remarks bluntly, "monogamy has never yet existed." *Love and Marriage*, p. 253.

little or no effect upon the supply of young wives, since pre-nuptial liberty seldom extends much beyond female marriage age, and their experience appears to leave no deleterious consequences, but rather to make the subsequent marriages more durable and stable. Illegitimate births are most rare and looked upon with the greatest disfavour. Prenuptial promiscuity licence or polyandry cannot therefore be said to lower to any appreciable extent the available supply of wives in normal polygynous communities.¹

We may take as a convenient illustration of fairly characteristic systems under which pre-nuptial matings take place, Professor Lowie's account of two marriage organizations among a South American and an East African tribe.

"The Bororo of the Mato Grosso are divided into the older men regularly married and living in separate huts,² and the bachelors inhabiting a special dwelling, where they jointly possess such girls as they capture from the village and for whom they pay to their mistresses' brothers or maternal uncles either arrows or articles of personal adornment, while these Brazilian data are unfortunately inadequate for a full comprehension of the social regulations involved, the Masai situation is perfectly clear. Here, there is segregation of the unmarried warriors, all men below approximately thirty, who cohabit freely with the immature young girls. Each brave has his favourite mistress, who tends his cattle and manufactures objects for his personal decoration. This mistress is never identical with the girl betrothed to a man in childhood; for his fiancée is obliged to dwell in another warrior's camp. So long as the warrior remains in his kraal, his sweetheart remains faithful, but if he absents himself for a single day, his exclusive claims upon her lapse, and she may choose another lover. In all these relations, the tribal incest rules are strictly obeyed. When a bachelor has had his fill of the warrior's life, he leaves the companionship of the kraal and settles down in a separate establishment with his fiancée, provided she has succeeded in avoiding pregnancy, which is considered disgraceful. Bororo and Masai usages, like the practice of prostitution among ourselves, obviously in no way conflict with the institution of individual marriage,

¹ This statement does not, of course, apply to declining races where a concomitant shortage of women leads to organized and permanent polyandry.

² According to Prof. Huxton, the Bororo men do not settle down and marry until they are about 40. *Races of Man*, p. 89.

which on the contrary is the normal condition after the period of youthful profligacy." ¹

Turning again to the monogamous countries of Christendom, we find a much larger proportion of women who inevitably remain permanently promiscuous, polyandrous, and sterile than in polygamous countries, since there must always be a large surplus of women that cannot be absorbed in monogamy. Yet the present tendency in English-speaking countries towards lengthening the postponement of the female nuptial age, coupled with a growing indifference to or intolerance of puritanical repression and with the diffusion of contraceptive knowledge, has greatly increased pre-nuptial female licence in all classes and, as a consequence, possibly tended to diminish in proportion the group looked upon as permanently unmarriageable—represented by the spectacle of that "human sacrifice on the altar of monogamy"—the commercial prostitute.

Thus, discounting surface appearances and considering only what is racially and biologically important in actual practice, the mating systems of all countries involve a balance between a polyandrous group of females and a monandrous group. In countries where polygyny is the accepted system the polyandrous group is temporary, mainly consisting of prenubile girls, who in due course are absorbed in marriage and become monandrous, whereas under the monogynous organization, a large proportion of the polyandrous group remains permanently polyandrous and is never absorbed in marriage. Further, under monogamy there is a tendency for the difference in the male and female nuptial ages to approximate more nearly than in polygynous countries, where a greater discrepancy in the nuptial ages lowers the masculinity of the nuptial age sex-ratio (i.e. increases the ratio of females at the mean average marriage age to males at the mean average marriage age) and in so doing favours the extension of polygyny.

In gerontocratic communities, for instance, the power of the old men to add to the number of their wives, whether for economic or for other reasons, will tend to lengthen the average male nuptial age, i.e. to postpone the age at which the younger men may expect to obtain wives of their own. Since the extension of the polygyny of the older men is necessarily limited by the available supply of nubile women, not already absorbed

¹ Lowie, R. H., *Primitive Society*, p. 51.

in marriage, they can only take more wives (apart from the fewer number of older women who become widowed) from the generation of girls reaching nubility, and this will deplete the supply of wives available for the young men, thus postponing their chances of acquiring wives of their own, i.e. postponing the average male nuptial age. The unmated pre-nuptial men then have recourse either to a small group of "communized" or polyandrous women whom they share, or to prenuptial or prenubile girls, or to the temporarily "borrowed" and superfluous wives of the old men (*pirrauru*, etc.). Whatever happens, from the point of view of the women, a balance is struck between the monandrous and polyandrous group, and this balance is conditioned both by the adult sex-ratio or surplusage of nubile women, and by the discrepancy in the nuptial ages.

Even in countries where the variation in the male and female nuptial age is least conspicuous the difference between the sex-ratio at the same adult year of life and the nuptial-age sex-ratio is considerable. The nuptial-age or effective mating sex-ratio provides the best and most convenient indication of the available supply of wives in a population at the beginning of marriage.

In Australia in 1921 the average age for bridegrooms was approximately $29\frac{1}{2}$ years and of brides 26 years, while the census of that year showed 2,762,870 males and 2,672,864 females—an excess of 90,006 males; this represents a masculinity of 1.66 (excess of males over females per 100 of both sexes). If now we compare the sex-ratio of adults of the same age, say each sex at the age of 29, we get 46,179 males and 46,949 females—an excess of 770 females or a masculinity of *minus* 0.88. Finally, if we compare the sex-ratio at the mean average nuptial age for the respective sexes,¹ we get 46,179 males aged 29 against 47,685 females aged 25—an excess of 1,506 females or a masculinity of *minus* 1.60.²

In this example we can compute the influence that the two factors of differential sex elimination and a differential nuptial age has upon the three sex-ratios taken. The crude sex-ratio

¹ I have for convenience reckoned the nuptial ages as 29 ♂ and 25 ♀ instead of the actual ages which were $29\frac{1}{2}$ ♂ and 26 ♀, the resulting difference would be insignificant.

² Attention may be called to the steady and decreasing masculinity of the Australian population accompanying the increase in the native born population. (Appendix VII, p. 301.)

of the population shows a masculinity of 1.66, the sex-ratio of 20-year-olds in the same population shows a femininity of 0.88, while the nuptial-age sex-ratio (which may be considered "the effective mating sex-ratio") shows a femininity of 1.60. If the nuptial-age variation were greater the excess of females would, of course, be correspondingly enhanced.

2

Universality of Polygyny and Normal Surplusage of Women

There is probably no question on which theological and conventional prejudices have to a greater extent vitiated evidence, both of scientific investigators and of those who make no scientific pretensions, than in dealing with the question of the present and former prevalence of polygamy. There is good reason to suppose that even the bare statistics we succeed in obtaining from the census departments of Christian Governments are liable to record a far lower quota of polygamous marriages among the populations of their subject races than would be shown if no such bias existed. For instance, the officially recorded number of polygynous males among the Navaho Indians is given in Appendix II, p. 285, Table iii. There is strong reason to suppose it is an under-estimate. In support of this supposition Dr. Gladys A. Reichard, of Columbia University, who has spent much time studying and living amongst the Navaho, writes to me : "Because of pressure brought to bear upon the Navaho Indians by white people who come in contact with them and because polygyny is by them so widely condemned, I do not believe that this number of males is at all accurate. In my experience many Navaho men are frequently monogamous when a census is being taken, and at all other times—at least when not inconvenient—polygynous."

Whenever Europeans have found the institution of polygyny general among their native subjects they have not only done everything in their power to terminate the practice, but have also pretended that formerly the practice existed only to a relatively small extent ; usually arguing that it could not formerly have been very prevalent owing to the supposed former shortage of females. Yet even before the growing shortage of females had made the custom die out for that reason alone, European

governments have thought it necessary to institute active measures to suppress it. In Fiji, after the passing of Regulation No. 12 of 1877, the legality of polygamous marriages was no longer recognized. The Commissioners in their Report on the Decrease of Native Population after stating that "the food staples of the people and their habits as regards the work of the women were more suited to the polygamous state of the race than to that now existing", are yet content with no better justification for European interference, which had brought the native race to its present decline,¹ than is implied in the words, "but we think that the time has come when these habits should be remodelled to suit the altered conditions of native life, and that the abolition of polygamy is not a matter for regret."² A similar attitude on the part of another British colony to native polygamy is, in the same Report, quoted in support of the policy of suppression. "The Commission appointed by the Governor of Cape Colony in 1882 to inquire into various Native Customs expressed an opinion adverse to the practice of polygamy; and, although the Commissioners did not advise the immediate suppression of the practice, they recommended that restrictions in the form of disabilities should be drawn around it with a view to its gradual suppression." The same policy of interference and suppression is, with disastrous consequences, still pursued in New Guinea³ and elsewhere.

Throughout the Melanesian and Polynesian regions, where depopulation is most marked, men are found to be largely in excess of women. A large deficit of females is noticeable in New Guinea, the Islands of the Bismarck Archipelago,⁴ and among the disappearing Australian blacks. The phenomenon is, in fact, most conspicuous wherever the population declines most rapidly. There is little doubt that the significance of this excessive masculinity has generally been ignored by reason of a widely held belief that it is no recent phenomenon, but was always characteristic of these races. Thus in the Fijian Report, the Commissioners state, "As it is certain that the females did not exceed the males, and in view of the custom of female infanticide, more than likely that the males were

¹ In a letter dated 16th June, 1886, to the Acting Colonial Secretary, from James Blyth, Secretary for Native Affairs, Fiji, considers the "strain of change from polygamy to monogamy part cause of decrease".

² *Report*, p. 11.

³ See pp. 139, 199, 200.

⁴ See Appendix VI.

then, as now, in excess, it stands to reason that, if polygamy was practised at all generally, a large number of males would have had to go without wives altogether." On the contrary, it can be shown that there is nothing less probable than that a surplusage of adult males always existed. It is difficult to understand how the Commissioners could have arrived at the conclusion that "formerly the males were, as now, in excess" on their own evidence, since they state in their Report that the evidence they have taken on the subject "tends to show that a few of the higher chiefs numbered their wives by tens . . . the petty chiefs and chiefs of septs had generally two wives . . . while the bulk of the men who entered the connubial relation had to be satisfied with one wife. It does not appear, moreover, that any class was distinctly debarred from marrying; indeed, the man who was unable to obtain a wife seems to have been the exception. Then, as now, practically all the women were appropriated." Referring to the New Hebrides, Banks Islands, and Tikopia, in particular, and Melanesia generally, Rivers¹ quotes Dillon² and Gaimard,³ "who both stated that women were formerly more numerous than men, Dillon going so far as to estimate the number of women as treble that of the men. . . As elsewhere the evidence concerning polygamy indicates a change in the proportion of the sexes." Numerous instances could be given of the abandonment of polygyny owing to changes in the proportion of the sexes, and a recent growing deficit of women.⁴ This fact is also referred to in the Fijian Report, where "the growing disproportion of the sexes owing to the increasing female mortality . . ." is cited by correspondents.⁵

The principal indication that the deficit of women is a recent phenomenon and concomitant with a decline in the total population, lies, however, in the fact that where vital statistics are available, they show that masculinity is progressive, and that when the population shows a tendency to rise, it accompanies a tendency for the masculinity of the population to diminish.

When the Toda population started to increase after a long period of decline the census reports showed an accompanying

¹ *Melanesian Society*, 1, pp. 351, 352, 309, 196, and 48.

² *Narrative of Voyage in the South Seas to ascertain the Fate of La Perouse's Expedition*, ii, p. 134.

³ *Voyage autour du Monde et à la Recherche de la Pérouse*, v, pp. 108 et seq.

⁴ Cf. also Rivers, *op. cit.*, pp. 18, 128.

⁵ *Op. cit.*, p. 68.

progressive diminution in the excess of men over women. At the same time polyandry was gradually becoming replaced by polygyny.¹ The decrease in the population of Aua Island (Bismarck Archipelago) dates only from 1904, yet in the brief space of twenty years the population dwindled rapidly, at the same time showing a progressive masculinity. Before their decline I was assured by the best native evidence that the surplusage of females was great enough to enable polygyny to be very general, while fraternal polyandry started to make its appearance after the decline in an endeavour to compensate for the ever-growing shortage of women. The Australian aborigines furnish another example.² Fenton, who speculated on the inequality of the sexes and the infertility of the women, accepted early Maori accounts that they were formerly blessed "with prolific wives, and not seldom with several, all producing simultaneously."³

3

Some Hygienic and Eugenic Aspects of Polygyny

Natives of Melanesia, unless their opinions have been influenced by missionary teaching or by the fear of offending European sentiment, frequently attribute their decrease to the decay of their ancient customs in relation to women and the abolition of polygamy. European investigators, on the contrary, endeavour to prove that the very customs they have been instrumental in abolishing were harmful, and that they should therefore be commended and not reproved for their interference. Even so reliable an investigator as Dr. Rivers, usually so discerning in his appreciation of native view-points, attached no importance to the effects that either the practice or the abolition of polygyny may have had upon the population. He writes: "The polygamy of Melanesia is very different from that of Africa, being so exceptional and the number of wives so small as to have no appreciable influence upon the people, whether for good or evil."⁴ We find it difficult to believe that Rivers

¹ See p. 261 et seq.² See pp. 295-6.³ Op. cit., pp. 28-30.⁴ W. H. R. Rivers, "The Psychological Factor," in *Essays on the Depopulation of Melanesia*, pp. 87-8.

failed to appreciate the significance and influence upon the psychological well-being of the people of their marriage system, an integral element in their culture which directly affects every aspect of the cultural complex, intimately related to chieftainship, to native economics, to sex-ratio, and to customs regulating the position of the women and children of the whole community during their reproductive cycle, through pregnancy and the lactatory period to the time the child is weaned. It is true that the quotation occurs in a book written in collaboration with missionaries in the field under the auspices of a missionary society, who have accepted it as a tenet of their belief that native marriage customs must on "moral grounds" be condemned. In such a context the subject could not, perhaps, have well been discussed with scientific impartiality. The generalizations, however, put forward as the justification for a cursory dismissal of the subject are open to serious criticism. In what general way does the polygamy of Melanesia differ from that of Africa? Inevitably there are innumerable local variations in tribal customs concerning marriage and chieftainship, but these are as marked, when we distinguish the customs of one part of Melanesia from another, as are the differences between African and Melanesian marriage customs generally. Neither is it true to say that polygamy was formerly exceptional, so far as the evidence shows, anywhere in Melanesia, nor that the number of wives is invariably smaller in Melanesia. As we have seen, variations in the effective mating sex-ratio condition the number of wives of members of any class in a community as well as the available supply for any general plurality of wives. In those parts of Melanesia where chieftainship is more highly developed, the chief's prestige is usually reflected in a greater number of wives. Thus the Trobriand chiefs frequently possessed sixteen or more wives. Among the Mekeo and Roro people, however, where no coalescence of clans under tribal chiefs produces chiefs of great power, the war and peace chiefs of each little clan seldom aspired to more than two or three wives, an ambition shared, though relatively less often realized, by every fully-fledged member of the clan.

Anthropologists, in dealing with marriage institutions, both in regard to descriptions of existing or historically recorded forms and to speculations as to origins, too exclusively classify them according to the rôle played by the man. This one-sided

approach has stereotyped the popular usage of the terms polygamy, monogamy, so that they convey the idea only of whether a man has one wife or a plurality of wives, in short the words are used as synonyms of polygyny and monogyny, the word polyandry being used to convey the idea of a marriage system in which the situation of one man possessing several wives is reversed and one woman possesses several husbands. It is an essential point in my thesis to insist upon the importance, for biological and sociological reasons, of distinguishing, primarily, always between systems or customs in so far as they affect woman—the breeding animal. That is to say, our classification should first relate to the mating condition of the woman—whether she be monandrous or polyandrous. Whether, in addition, the man is monogynous or polygynous is relatively of smaller biological or racial consequence, except in so far as the exclusive sexual use of a monandrous woman by a monogynous man influences her in her reproductive capacity. This point we shall examine.

Everywhere in practice we find a balance struck between monandry and polyandry, a balance that is intimately connected with the sex-ratio or the available proportion of women. Either the same women may at one period belong to the polyandrous, afterwards passing to the monandrous, group, or, where the surplusage of women is greater and the polygynous organization more strict (under such institutions as *pardah* and the *harim*), it becomes possible for the greater proportion of the women to remain during the whole period of their reproductive cycle segregated under monandrous conditions. In more primitive communities, where sentiments arising from the instincts of sex and acquisitiveness are less individualized, we frequently find group sex-relationships associated with and limiting individual marriage and monandry. Thus in many Australian districts there exists a form of sexual union called *pirrauru*, first described by Dr. Howitt in his studies of the tribes of the Dieri, east of Lake Eyre in Central Australia. Similar customs have been found in many other tribes. *Pirrauru* unions are formed in addition to and apart from permanent individual (*tippa-malku*) marriages and involve a relative (occasional or temporary) polyandry of the women. A woman can have only one individual *tippa-malku* husband, but may have a number of *pirrauru* husbands subject to the consent of

her *tippa-malku* husband, to whom she has been betrothed in childhood, and who has, whilst he is with her, exclusive claims upon her labour. A man, however, may have several *tippa-malku* wives at the same time. The *pirrauru* institution limits the sexual monopolization of wives by their regular or individual husbands, whose marital rights under certain circumstances and at certain times are shared by the extra or *pirrauru* "husbands". The men who form a *pirrauru* group and similarly the women are members of the same tribal subdivision, and either consanguineous or collateral brothers or sisters. Only married women may be made *pirraurus*, though unmarried men may have *pirrauru* or occasional wives allotted to them. Intercourse with a *pirrauru* wife is allowed during the absence of the *tippa-malku* husband and also at special festivals. In Australian tribes without this institution many of the younger men would be debarred from sexual intercourse, most of the young women being in the possession of the older men.¹

Polygynous institutions (including concubinage as well as legal polygamy when it exists as a separate and additional institution) are of great sociological importance in their relation to other institutions such as chieftainship and to the sex-ratio problem in so far as they provide the only normal and healthy means of absorbing the surplusage of women. Psychologically, they satisfy the polygynous propensities of man, while, at the same time, ameliorating the condition of the monandrous woman by obtaining for her complete sexual segregation during pregnancy and suckling, the conditions which natives in polygynous communities generally consider very important. These considerations and those that follow will suggest that the best and healthiest conditions for monandry are only obtainable in conjunction with strict polygynous institutions. It is among professedly monogamous people that the essential dissimilarity of the male and female sexual cycle is habitually ignored. In most discussions of the question the obvious fact is overlooked that the gratification of the sexual impulse by the female is according to nature's plan followed by a long period between conception and parturition, then by another long suckling period until the child is weaned. During the whole of this cycle a

¹ Cf. discussions on *pirrauru*, by Westermarck, op. cit., iii, pp. 247-80; Malinowski, *The Family among the Australian Aborigines*, pp. 108-31; and Fehlinger (Eng. trans.), pp. 20-3.

woman's sexual activity is normally in abeyance and her body adapted to the physiological processes of reproduction. But the male soon after his co-operation in the sexual act is again ready to play his sexual rôle.¹ Thus the complementary sexual functions of the two sexes are better expressed in polygynous than in monogynous institutions. We may not unreasonably find an indication of this in the patent fact that sex antagonism is most acute in monogamous and least noticeable in polygynous communities.

An example of native instinctive recognition of these facts and of the care for pregnant and suckling women, which is only found among polygynous people, is the Fijian institution of *dabe*. The word is usually applied by Europeans to the custom of separating the parents of a child during the suckling period, but in the vernacular it actually signifies the injury sustained by a child whose parents have cohabited too soon after its birth. It is then said to have become *dabe* and to exhibit symptoms of debility. According to the Report, "Native witnesses, old enough to remember the customs of ancient times, state that a child was suckled for a period varying from twelve to thirty-six months—in rare cases longer. During this period the mother refrained from cohabitation owing to the fear, partly of impoverishing her milk, and partly of again becoming pregnant before her child was weaned. . . . Until, therefore, the Fijians adopt the use of milk or other adventitious food for infants," the separation of the parents for a protracted period is not only salutary but actually necessary; and the opinion of the natives, disregarded as often as expressed, that the decay of this custom of sexual abstinence is a grave cause of infant mortality, would seem to be founded upon sound truth."²

The taboo against intercourse with a pregnant or suckling woman obtains over a wide area among polygynous people. Innumerable examples could be furnished by ethnographers of Africa and Oceania. The proscribed period sometimes extends

¹ Cf. *Sex Antagonism*, p. 14, by Mr. Heape, who calls attention to this usually ignored elementary fact.

² A change in this direction is everywhere taking place. With the advent of European foodstuffs and the decrease in breast-feeding, lactary troubles start to be common among native women, while the men, in striking contrast to the care of former times, show an utter disregard for the condition of their women in all stages of pregnancy and childbirth. One witness made the significant observation, however, that while native children do certainly seem to suffer from *dabe*, the offspring of native women by Europeans are not so affected.

³ Op. cit., pp. 146, 147.

over three years and more. Chaudouin refers to the law of King Geble of Dahomey forbidding marital intercourse for three years after childbirth.¹

The segregation of the expectant and the suckling mother, in view of the contrast in the male and female sexual cycle, is, as the natives know well enough, only secured by the adoption of polygyny, which thus provides better conditions for mother and child, and also guards against the evil consequences of over-gestation. These facts, too, had to be recognized by the Commissioners: "When polygamy was the rule, the mother, it is said, was allowed some four or five years in which to rear her child before again assuming the duties of maternity. This principle held such a place in the estimation of the people that there still remains a very strong feeling against *dabe*, which may euphemistically be termed the bearing of children in too quick succession. The conduct of the husband in such cases is reprobated by public opinion. How could the proper nourishment of young children in a country destitute of milk and farinaceous diet be better ensured than by the fear that intercourse between the parents during lactation would impoverish the mother's milk and injure the child? In these days the custom of abstinence is decaying, so that the mother is again pregnant before her child is fit to assimilate solid food, and she must either continue to nourish the child within her and the child at her breast, to the detriment of both, or prematurely wean the latter to the certain injury of its health. It would seem that the polygamous life which existed among the higher classes of Fijians was not ill-fitted, had other things been equal, for the rearing of Fijian children; and there is little doubt that in monogamous households children are born at much closer intervals than was customary in the era of polygamy, whilst the standard of nourishment has remained stationary."²

It is significant that in those communities where the upper or chieftain castes tend to be more polygynous than the generality, the offspring of the former appear, by such standards as those used, for example, in reference to the Fijian inbred groups, to be of a better physical type. In spite of the fact that polygyny

¹ E. Chaudouin, *Trois mois de captivité au Dahomey*, Paris, 1891). See also Westermarck, *Human Marriage*, iii, pp. 68-70; Havelock Ellis, *Analysis of Sexual Impulse*, p. 272 et seq., and *Sex in Society*, pp. 16 et seq., 18. Each of these authorities gives numerous examples.

² Loc. cit., pp. 125, 191.

protects women from over-gestation or births at too close intervals, the fertility of wives of polygynous husbands actually appears to be superior to the fertility of the wives of monogynous men. Thus the full-blood polygynous marriages among the North American Indian tribes (almost exclusively Navaho) show a slightly higher fertility rate, the offspring an appreciably higher survival rate, and a lower sterility rate per wife than the full-blood monogamous marriages. The average number of children per mother in polygynous marriages. (1910) was 4.7, and for full-blood monogamous marriages 4.5, the survival rates being 75 per cent for the offspring of polygynous marriages against 69 per cent for the offspring of monogamous marriages. The sterility rate for wives of polygynous husbands was 6.2 per cent, and for monogamous wives 10.7 per cent.¹ We cannot, therefore, accept Westermarck's generalization, based on Felkin's on the "Baganda", that polygyny tends to reduce the number of children born to each married woman, except in so far as it tends to prevent over-gestation.² In innumerable ways evidence shows that the most favourable breeding conditions are obtainable for the mother only under polygynous conditions, which not only secure for her a monandrous existence during the whole mating cycle, but protect her from the too frequent and continuous attentions of even one man, especially during gestation and lactation. That longer intervals between pregnancies mean more favourable intra-uterine conditions is, indeed, generally recognized.³

We may derive another significant indication, which suggests that over-exposure of the female to even the same male is unfavourable to, or even inhibitive to, fertilization, in some

¹ Dr. Reichard believes that among the Navaho sterility in one wife is often a cause which induces a man to take another; if that is so, the superior average fertility of wives of polygynous husbands is even more significant. Dr. Reichard writes (privately), "Although such a notion is denied by the Navaho themselves, it is my opinion that sterility is often a cause of polygyny as evidenced by a number of cases which occur in my genealogies."

² Op. cit., iii, p. 79.

³ Although the problem is more noticeable among human beings on account of our no longer having, like other mammals, definite seasons and owing to a man's uninterrupted period of sexual activity, most writers in monogamic countries are strangely oblivious to it. Sociologists hardly ever refer to it. Mr. Ludovici's *Woman & Vindication* is an exception. In this polemical but interesting and vigorous book he bases, as an Oriental or Polynesian instinctively would, his repudiation of monogamy as an ideal mainly on its obvious incapacity to reconcile the male and female sexual cycles, and to secure adequate conditions for a sheltered gestatory and lactory period for the mother. Op. cit., p. 163; also pp. 72-4, 175-6.

recently reported experiments¹ on animals of investigators who have produced a serum from extracts of male sperm cells, which injected into the female produces temporary sterility. These experimenters were led to their discovery by the supposition that female organisms might become immunized against the male sperm cell in the same way that resistance to certain microbic attacks is obtained by long exposure to them, which gradually develops "antibodies" and thereby immunity to future infection. By an analogous process they would explain the much greater liability, apart from the mother's age, to become pregnant during the early years of marriage. The well-known small tendency of prostitutes to become pregnant, which cannot be altogether attributed to chronic venereal disease, would also be accounted for by an immunization through over-exposure, though here it is probable that, as Dr. Westermarck suggests,² there is an additional sterilizing factor involved; since it may be supposed that the spermatozoa of different individuals have a counteracting effect upon each other. We may also suppose that here we have the explanation of the temporary sterility of young native girls in those races where complete pre-nuptial licence is tolerated, while pre-nuptial pregnancy is rare.³ We get further support from this fact for the view that the polyandrous female is relatively sterile. That is to say she tends to be sterile during the period she is polyandrous, whether this is only a temporary stage such as during the time of pre-nuptial intrigues, or a permanent state such as is met with in communities where owing to a deficit of women, a certain proportion become comunized. When a regularized and limited polyandry, such as is met with in Thibet, or among the Todas, occurs, women lead a relatively less polyandrous life than in the former instances of promiscuous polyandry.⁴

¹ Undertaken, I believe, by Guyer, Dittler, Metchnikoff, and McCartney.

² Op. cit., i, p. 335.

³ European observers, such as missionaries and government officials, have often supposed that some mysterious contraceptive drug was used by the unmarried girls. Native herbs and roots, mixed together with all manner of magical substances, such as spider's eggs, skins of snakes, etc., are as a matter of fact made into concoctions and drunk by girls with this idea. I have myself collected such recipes from Melanesian and Papuan sorcerers and old women, but there is no reason to suppose that they have any physical effect.

⁴ In Aua, the deficit of women brought into existence a small group of *puella publica*, thereby still further depleting the breeding quota. They were all apparently sterile, and were all rejected as wives on the ground of some definite defect. One or two were cripples or had defective eyesight, but the reason usually given for the unsuitability of the bulk of them for marriage was that they were *vetssi-vetssi* (lit. wet). This complaint was almost certainly leucorrhoea,

The care that Eastern races generally take to segregate their women before and after childbirth is reflected in widespread customs and beliefs, such as *dabe* in Fiji and *e gori* in Tonga and the Gilbert Islands, and in the laws of the Koran. This care and these customs would have been impossible except in a polygamous system, as the old natives well knew. Their view-point is well illustrated in the following answer given by an old Maori chief to a missionary, who with the ignorance and assurance of religious bigotry was condemning the custom of an alien people.¹ The conversation which took place between Archdeacon Maunsell and Paora Tuhaere, a highly respected chief of the Auckland district, is given in full by H. Stockwell (Hare Hongi) in his *Maori-English Tutor*. Speaking through his interpreter the Archdeacon concluded his speech as follows: "' Say to Paora that the bad custom of having two wives (*moe punarua*) is still going on amongst his people, and that I want him to give me a solemn assurance that he will in future do everything in his power to stop it.' This was done, and, after an interval of silence, Paora asked in a piqued tone of voice:

" ' Has the European finished speaking ? ' The Archdeacon replied that he had.

" ' Now you tell him,' said Paora, ' that I am unable to give him the assurance that he asks for.' This was done.

" Paora continued: ' Tell him that, as he himself knows, it is a custom of the Maori, and has been a practice from time immemorial.' This was done.

" Paora resumed: ' Tell him that far from being a " bad practice " as he says, it was a good practice, a practice infinitely preferable to that of the Pakeha people.' This was done.

" Said Paora: ' Tell him that by our custom when the wife of a Moari becomes pregnant, her husband ceases to have intercourse with her; that she is carefully put away until her child is born and baptised.' This was done.

" Paora continued: ' Tell him that by this custom the Maori was enabled to grow a race of chiefs, of noble and handsome men and women, physically and mentally strong, a race of *rangatira* and *tohunga*.' This was done.

and not a venereal complaint, which would have been contracted by the men as well. There was at that time, I am convinced, no venereal disease on the island.

¹ For the Bantu view of the virtue and merits of polygamy compare Molema, *The Bantu, Past and Present*, pp. 128-33.

" Paora had now risen to his full height and his voice vibrated with the passion and eloquence of racial pride: ' Tell him,' thundered Paora, ' that whereas the birds of the air and the beasts of the glades cease to pair when the female is fertilized and for long intervals, to my certain knowledge the *Pakeha*, with his model one-wife system continues to occupy the same apartments till within a very few nights of the birth of a child. Such a practice as that is to the Maori most abhorrent (*rihariha rawa*) and I will not advocate it, come what may.' This was done.

" After a short interval of perfect silence the Archdeacon, realizing that Paora had concluded, turned away and slowly left. They never met again."

Before leaving the subject of the physiological effects of polygyny a word may be said on the eugenic aspect. The physical and mental superiority of the chiefly castes in Polynesia and Melanesia was constantly noticed by those who first came into contact with Tahitians, Samoans, Fijians, and Maoris. This superiority was shown in stature and development, in prowess and ability in war, in craftsmanship, in priestly magic, in leadership, mythological knowledge, song and lore. There is little doubt that caste distinctions among Polynesians and Melanesians may often bear a certain relation to ethnic distinction,¹ but there can be equally little doubt that polygyny aided the chieftain castes to maintain their higher standard. It not only gave them a wider choice of the finest women, but enabled the finest men to leave a greater number of descendants. The finest types were thus constantly recruited from their own finer stock, while the whole community was constantly being recruited from its best elements, or from above rather than from below, after the stupid and dysgenic method of our own civilized society which rewards the ability to rise in the social scale with sterility.

4

Polygamy and the Missions

The effects of European (including missionary) attacks upon Native Marriage are discussed elsewhere under different headings, so little need be said here on that subject, but

¹ Cf. Best, " The Peopling of New Zealand," in *Man*, 1914, No. 37.

a few words may be devoted to describing the attitude and methods of Missions, particularly those operating in Melanesia, towards an institution, the psycho-biological and sociological aspects of which they seem to understand so little, and to have so little concern for. Invariably and inevitably moral rather than biological considerations are of prime importance from the missionary point of view. From this point of view native customs must be judged by the standard of the missionary's own Christian code by which alone can be determined whether any conduct or any custom constitutes a sin, irrespective of the biological consequences of "sinful" or "virtuous" conduct, or even whether it leads to the survival or extinction of the race. In this light the Rev. Walter Lawry, "one of the pioneer missionaries to the South Seas, thought he foresaw that the teaching of Christianity and the inculcation of the customs of Western civilization, while raising the individual character of the natives, would ultimately result in their extinction as a nation. He regarded this event as the retributive justice of Providence for the idolatry and bloodshed of heathen times."¹

Just as missions for proselytizing the heathen are bound to judge of every aspect of native life in its relation to the success of their enterprise and by their standard of what constitutes a sin, so must we, as ethnologists, pronounce upon all customs as exclusively as possible according to their discoverable biological or psychological effects, remaining indifferent to considerations of imported morality or sin, which we are not called upon to decide.

As is well known, practically all Christian Missions to the heathen, of whatever denomination, with, I think, the sole exception of the Mormons (the Church of Jesus Christ of Latter-day Saints),² uncompromisingly condemn native polygamous customs, and invariably use all means in their power to suppress a system which they consider opposed to Christian principle.

¹ Quoted in *Fijian Report*, p. 64.

² Mormon missions are strongly established in many parts of the Pacific, and from such observations as I have been able to make where I have come across them, they appear to interfere less with all native customs than any other missionaries, for the most part concentrating their efforts on teaching their adherents European crafts and to hold their own when in commercial contact with European traders. While the Mormons no longer advocate polygamy, they, for obvious reasons connected with their own history, refrain from reprobating it.

and to bring pressure on European administrations to do so. There appears to be little fundamental difference between the attitude of Roman Catholic Missions and the various Protestant Missions on this question. Possibly the Catholic Missionary is more thorough in his methods and uncompromising in his views than some of the Protestants, who, as in all things, exhibit a greater individual variation between latitudinarian and the most extreme views.

The question that missionary bodies feel themselves called upon to decide is their policy in dealing respectively with (a) prospective polygamist converts, (b) polygamist converts, and (c) converts or their descendants who relapse into polygamy. The first category present few difficulties to them, since no heathenish practice or custom is held to debar a heathen from the chance of being converted, and so of being "saved" from the consequences of continuing in a state of "sin". On these grounds it is customary to accept polygamists as "candidates under Christian instruction", their admission to baptism being usually deferred until such heathenish customs as are held to be incompatible with Christian principle have been abandoned. The polygamist convert accepted within the fold must, of course, be induced to abjure polygamy. Having done so, the problem arises: How to dispose of his wives and children? Relapsed polygamists, or the children of Christian converts who revert to polygamous customs, are practically in the same category as prospective converts. They need further instruction and must be induced to repent before again enjoying the privileges of membership of the Christian body. Often the view is taken that they should be punished, and certain Papuan missionaries are fond of invoking the Civil Power to have them arrested on charges of "bigamy".

The disposal of the wives and children of polygamists is usually recognized to be a difficult question and missionaries do not appear to be unanimous on this subject. A small minority, with Bishop Colenso, used not to be in favour of requiring polygamist converts of "old standing" to cast off their wives and children. They were content to debar converted polygamists from being "admitted to offices in the church".¹ This solution, however, is generally considered to be too latitudinarian.

What Mr. Junod calls the *idealistic view* is taken by those

¹ Quoted by Junod, *op. cit.*, p. 277.

who are satisfied with the "promise on the part of the husband and his extra wives to have no conjugal relations any more, and allow the separated spouses to remain in the husband's village, and the husband to care for them and their children." This solution Junod rejects, since he finds that experience shows it leads to the missionary being deceived; the convert pretends to lead the life of a monogamist but in reality leads the life of a polygamist. Indeed, why should there be any reason to suppose that a Bantu convert is less capable of deception in this matter than the average European Christian in England?

Usually, at least in Melanesia, the husband is required to banish "extra" wives, their disposal being considered satisfactorily accomplished if another native Christian can be induced to marry them or if their parents accept them back. At all costs they must be banished from their husband's home. According to Junod: "The course which is followed by almost all the Missionary societies, set forth in the regulations of the Berlin Society and in the Report of the Anglican Conference of Bishops at Lambeth is the following one: Polygamists must not be admitted to baptism, but be accepted as candidates and kept under Christian instruction until such a time as they shall be in position to accept the law of Christ. (*Resolution of the Lambeth Conference; see Edinburgh World Missionary Conference, Report of Com., II.*) Wives of polygamists, on the other hand, ought not to be denied baptism, if they deserve it, as it is not in their power to separate from the polygamic family."¹

Further minor problems arising out of this are discussed. Which wife should be retained? "Is it the first wife, or the Christian wife (supposing that the others are still heathen), or the wife who has the greatest number of children? No fixed rule has been adopted by any mission. . ."

We may turn from the general or theoretical missionary policy towards polygamist natives, to a brief description of a few observed instances, which may help to illustrate how particular missionaries in the field have acted as the situations arose. I have no doubt that the procedure adopted by different missions may vary considerably, though it may be legitimate and convenient to refer to instances coming within the orbit of personal observation or to those which can with certainty be verified.

¹ Loc. cit., p. 278.

In the village of Waima, in one of the settlements of the Roro-speaking tribe, of Southern Papua, near Cape Possession, within the sphere of influence of the Mission of the Sacred Heart, I came to know one Tata-Koa, an *ovia paiha* (chief clan sorcerer) of great repute. From him, and also from the Catholic Father at Waima, I learn the following. Several years previously his son had married polygamously a second wife in defiance of the missionary's displeasure. Notwithstanding the priest's warning, this son, following the bad example of his father, and the former practice of all men of position in his tribe, remained in contented enjoyment of the prohibited union. A few years later he fell seriously ill, and notwithstanding the great magical powers exerted by his father grew steadily worse. No doubt the old sorcerer was entitled to suppose that the cause of his son's illness was not unconnected with the malevolent magic of the evilly disposed white priest. At any rate, no sooner had news of the son's illness reached the missionary than the latter made haste to pay the sick man a visit. Explaining that he was undoubtedly being chastened by God for his obdurate sinfulness, he urged him, while yet there was a chance, to avert the anger of the Almighty and atone for his sin in the only way he could by instantly dismissing his second wife. This exhortation, however, only evoked a more determined obstinacy. Summoning his full strength, the sick man curtly bade the priest go and leave him in peace. Seeing the uselessness of further effort on his part the white man left. A few days later the missionary learnt that the sick man was on his death-bed. Hoping that his powers of persuasion might be enhanced in proportion to the sick man's dwindled resistance, the Catholic Father paid a second visit. With all his eloquence he depicted the awfulness of Eternal Judgment. He told me with pride how, after persistent preaching and waiting, he had at last succeeded in propping up the dying man and in hearing him dismiss the cowering woman from his hut. Tata-Koa, as he told me his version, added, as though in extenuation of his son's surrender, "But my son very sick man."

Sometimes more forcible measures are taken to enforce "Catholic marriages" and to suppress native polygamy, as in the following case which occurred in 1906. A Mekeo man already married by native custom decided to marry a second wife. This was arranged and the bride-price fixed. Although the

man's village was some distance from the Mission station, the matter was reported by a local mission boy. In order to escape missionary interference the man took his new wife to the coast. When they had reached a point close to Maiera, a village near the shore, they were intercepted by a Catholic Father and native mission teacher. The girl was kidnapped, but the husband escaped. The girl's hands were tied together by string and she was led back to Inawa. Father P. then left the woman with his teacher at Möu. Inapi, a native from the village of Inabui Kipo, a relative of the woman and a *paia* chief (i.e. a war-magic expert, and therefore an important person in native opinion), now went to the native teacher to demand the release of the girl. This was refused by the teacher, who attacked Inapi, cutting open his cheek. The latter retired but reported the matter to the Resident Magistrate at Kairuku, my informant, who investigated the case. This magistrate, who happened to be an anthropologist, took a view sympathetic to native opinion, but distasteful to the missionaries; in consequence of his disagreement with the Mission he was removed to another district by the Government.

Although the Government in Papua recognizes marriage by native custom, provided the native is not a Christian who has been "legally" married by Christian rite, where missionary influence is greatest or within a certain radius of mission headquarters, so much pressure can be exerted on natives that "native marriages" seldom take place. The following illustrates what happens.¹ Mori-Aitsi of Möu, whose first marriage was "legal" (i.e. was celebrated by the mission), took—by a native ceremony—as his second wife, Tita-Aro. Warupi, a Catholic boy, with the connivance of the mission people, kidnapped the girl from her husband, and dragged her to the mission church, where the priest married them.

A similar experience befell Naimi Rouma, a native of Chiria on Yule Island, the village that lies closest to the Sacred Heart

¹ By a ruling of the Chief Judicial Officer embodied in the Government Circular Instructions, the following applies to (second case) a man, married in the Church, to first wife who takes a second according to native custom.

"By regulation No. 76 (4) a woman that by the customs of natives is the wife of a man shall be deemed his wife. This would apply to the first case where there are two native marriages, but not to the second, for native custom could have no application to a case where there is a legal marriage. Therefore, in the first case, both women are wives for the purpose of the Regulations if native custom in the particular tribe or village recognizes them as such, and the second wife may be convicted of adultery.

"In the second case, only the wife of the first (*marriage*) can be considered, and the second wife cannot be convicted of adultery."

Mission. Dispensing with the favours of the Church, Naimi Rouma was about to marry Avia Oa in native fashion. On the night that he had arranged to take the bridal price to the girl's parents, who had consented to the marriage, a good Catholic boy from the mission, on the advice of Fathers L. and G., waylaid the girl and took her to the mission, where he slept with her that night. The following morning they were "legally" married in the church. In these two cases, which occurred about the time of my stay or shortly before, the husbands had no redress against the abduction of their wives.

Another incident of the kind which occurred in 1918 was first told me by two of the Catholic Fathers, who much resented the action taken by the Resident Magistrate on that occasion. Various details were afterwards verified from native sources. Voi-Aipu-Aianga, a young woman from the village of Bebeo, at her own desire and with her father's consent, who had duly received the customary bride-price, was married to Waike, also a native of Bebeo. Waike, who had worked for a considerable time on the Ongabunga coconut plantation, had already one wife. Paike-Avia, a native mission teacher of Inavauni, hearing of this polygamous marriage, decided, in the interests of Catholic morality, that the second wife should be taken from her husband, and married to a good Catholic boy. Filled with this pious intention, Paike-Avia first sent some Inavauni mission boys to beat the girl's father for having consented to the marriage, and afterwards himself repaired to Bebeo with the Village Constable of Inavauni, where the assault on the old man was renewed and his finger broken. Paike-Avia next forcibly abducted the girl and shut her up in his house at Inavauni for several days, telling her that he had chosen a Catholic boy whom she should marry. She was of course by native custom still married to Waike. On her release, the girl journeyed to the R.M. at Kairuku, in order to obtain protection from the mission teacher and the missionaries. The R.M. merely told her she was entitled to be married as she wished, without molestation. However, on her way back to Bebeo, she was again waylaid near the Ongabunga Plantation by Paike-Avia and Aia, the Inavauni V.C. Paike threatened the girl with dire penalties, and when she tried to escape, gave chase. The girl ran for protection to the house of the manager of the Ongabunga Plantation,¹

¹ A Mr. Roger, who was himself a Catholic.

who sheltered her for the night and drove the Inavauni natives away. As the result of these proceedings Paike-Avia and the Village Constable were brought before the R.M., charged with assault and gaoled for three months. The Catholic Mission endorsed the conduct of Paike-Avia throughout the proceedings, making the strongest protest at the action of the R.M. in punishing their zealous mission teacher. So strong, however, is the power of the mission that the girl was eventually again abducted from her husband and married to a Catholic boy in the mission church.

The bare facts of these unrecorded and trivial little histories cannot be disputed, and are given as they provide a better commentary on the incompatibility of native and missionary marriage ethics than any generalized discussion could. They may suggest, too, to the impartial observer the patent injustice of forcing an alien code upon a people whose whole social organization and whose every idea conflicts with it, involving, as it does, a degree of interference with private life and of persecution that even the people of Europe, who profess to accept that code and that morality, have never, since they were freed from the Inquisition, for a moment tolerated.

IX

PSYCHOLOGICAL FACTORS

I

The Importance of Psychological Factors for Survival

THE psychological causes of depopulation, reflected in a general insouciance and depression of the native mind accompanied by a growing disinclination to bear children, although usually the most neglected, are beginning to be recognized as the most important—as the determinants and the summation of all causes.

By destruction of their interest in life natives become maladapted, a circumstance which throughout organic life leads to eventual extinction. Animals and plants, Darwin remarked,¹ are often rendered in some degree infertile or completely barren when removed from their natural conditions, while in man, too, the effect of changed conditions of life can be measured in human decrease. Stevenson, with a penetration and insight into the problem not often exhibited in his day, nor even to-day, saw that “where there have been fewest changes, important or unimportant, salutary or hurtful, there the race survives. Where there have been most, important or unimportant, salutary or hurtful, there it perishes. Each change, however small, augments the sum of new conditions to which the race has to become inured”.² To survive change requires readaptation, but all experience points to the lesson that readaptation to changed physical conditions is easier of achievement than mental and cultural readaptation. Change in merely physical conditions, if not too great, provokes and stimulates the purposive mind to master the task of readjustment, whereas a change which limits in any way the normal functioning of habitual mental tendencies (such as is inaugurated by the subjection of a race to alien dominance and control,

¹ *Variation of Animals and Plants*, p. 162 et seq.; *Descent of Man*, p. 294.

² *In the South Seas*, p. 41.

which irresistibly curbs, modifies or checks the hopes and ambitions attached to every phase of their activity) deadens rather than stimulates the mind, in which interest and self-confidence is stamped out. All adaptation is primarily psychological in as much as adaptation, the condition of survival, is a purposive process, even when it is unconscious.

Hygienists and physiologists may argue that they can find no recognizable mechanism to explain how "boredom" or loss of the *joie de vivre* alone could operate so as to produce little by little the extermination of a race. Yet, I have, I think, shown that no physical process of elimination short of total extermination can counteract the race surviving tendency secured by the almost inexhaustible potential capacity of human fecundity to produce a surplus over the total leakage from all the factors of elimination. It would seem to be practically impossible to exterminate a race that is determined to survive, or the Jews would have been exterminated two thousand years ago.¹ But when readaptation becomes impossible because it is beyond the capacity of a race to modify the cultural and environmental conditions which have been abruptly disturbed the determination to survive also dies.

We shall have to examine the grounds that exist for inferring a considerable variation in the innate range of adaptability and capacity for readjustment of different races, and to discover means of distinguishing differences of temperamental constitution. We may then be in a better position to appreciate the part played by the different groups of influences effecting a disturbance of the cultural complex.

Before proceeding with a more detailed analysis I may attempt to give a slight and sufficiently familiar picture of the general symptomatology of a race in the early stages of disequilibrium.

Stevenson was greatly impressed by the absence of a will to live which seemed to overtake the native races of Polynesia and afflict them like a chronic disease from which they never recovered whenever Europeans established a control over their

¹ I have no hesitation in describing the Jews as a race, in accordance with the definition of "race" set out on a former page. Dr. Salaman, and following him Feltman, have recently very ably maintained on biological and Mendelian grounds the propriety of referring to the Jews as an ethnic group. Refer also to Lothrop Stoddard's discussion of the origin of the Sephardic and Ashkenazic Jewish groups and the biological and ethnic bases of the Jewish question. "The Pedigree of Judah," in the *American Forum*, March, 1926.

lives. "The Polynesians," he wrote, "are subject to a disease seemingly rather of the will than of the body. I was told the Tahitians have a word for it, *erimatu*." I witnessed this same disease of the will among the Aua Islanders, a disease from which they had suffered ever since the disaster of 1904¹ had convinced them of the irresistible power of the white foreigner. They, too, had a word for it, *tatareri*. It was heard most often after the brief visits of the European's copra schooner, or after the epidemics of sickness with which those visits so often coincided. They would utter the word as an answer when asked why they sat on such occasions in glum silence without inclination to do anything. Many white men would translate it "I am lazy", but laziness is not the reason why a once war-like, proud and happy race changes gradually into listless, docile and suspicious islanders, which better describes the present character of this people than the reputation for ferocity they earned a few years ago.

"Their prospects are hopeless", wrote Herman Melville of the Tahitians, "nor can the most devoted efforts now exempt them from furnishing a marked illustration of the principle which history has always exemplified. Years ago brought to a stand, where all that is corrupt in barbarism and civilization unite to the exclusion of the virtues of either state; like other uncivilized beings, brought into contact with Europeans, they must here remain stationary until utterly extinct. The islanders themselves are mournfully watching their doom."²

We have seen how invariably and persistently European administrators and Christian missionaries seek to disturb the marriage system and the sexual customs and life of the pagan people under their control; and we saw how far-reaching were some of the clearly discernible physical consequences of such action. What was not emphasized, however, was the particular influence that any serious disturbance of the *vita sexualis* must be expected to have upon the psychology of the individual, and in a direction most intimately connected with his capacity and function in generation—and so upon the fertility of the race.

The correlation existing between sexual desire and fertility still needs a complete elucidation. In discussing the question

¹ See Supplement, p. 273.

² *Omoo*, by Herman Melville, p. 268.

of the supposed vestiges of an original pairing or rutting season Westermarck considers that there is sufficient evidence among our early human or pre-human ancestors to show that the annual period of increase of the sexual desire, usually in spring, coincides with an increase in reproductive power as indicated by statistical data relating to the distribution of births over the different months of the year.¹ But it is a matter of common observation that sexual desire and vigour tend remarkably to be inhibited by anxiety, depression or the influence of any strong emotional distraction. Personal observations must convince any careful student of the particular amenability of savages to inhibitive and disturbing influences acting upon the normal expression of their sexual life. For instance the mental condition of "*je m'en fischism*" (to borrow an expressive phrase from French colloquialism) which the Aua Islanders called "*tatareri*" was reflected in an abatement or apparent suppression of all sexual desire until some native festival or other recurrent episode of their social life had succeeded in again obliterating from their mind the coming menace of the white man's dominant interference.

There seems to be little reason to doubt that primitive races, while they vary considerably in this respect, are, on the whole, far more liable to react strongly to a disturbance of their social and sexual life than Europeans. A circumstance easier to understand if the assumption, based on apparently sound evidence by Havelock Ellis, supported by Spencer and Gillen, and others, is correct that the sexual impulse in savages in the intensity and frequency of its manifestations is relatively and habitually weaker and more easily disturbed than in Europeans. In support of this view Ellis lays stress on the more clearly observable periodicity of the manifestations of their sexual impulse aroused to strength under the impetus of powerful stimulus on organized occasions, when their apparently abandoned licence has led less penetrating observers to infer on the contrary a more vigorous and abundant sexuality, the frequency that sexual intercourse is (during lengthy periods in savage life) placed under *tapus* and restraints, and the comparatively undeveloped state of their sexual organs.²

It is particularly in regard to the influence of these depressive

¹ *Human Marriage*, ii, p. 94.

² *Analysis of the Sexual Impulse*, pp. 253-66, 278.

and disturbing factors upon the mental state of the women, and its effect, actual or possible, upon their fertility that we need a more detailed and scientific confirmation of suspicions which amount almost to certitude. The close connection between the process of tumescence and pregnancy has, however, been to a great extent established, at any rate sufficiently to enable us to account with a plausible degree of certainty for the increasing relative sterility among the people whose emotional life (in its social and sexual connections) has been disturbed and to trace it to a psychological origin. "Tumescence is not merely a more or less essential condition for proper sexual intercourse. It is probably of more fundamental significance as one of the favouring conditions of impregnation. This has, indeed, been long recognized." Havelock Ellis in this connection quotes Matthew Duncan's statement that "'desire and pleasure in due or moderate degrees are very important aids to, or pre-disposing causes of fecundity, as bringing into action the complicated processes of fecundation.'" ¹ The close association between endocrine secretion, and emotional states and adrenal secretion, and between all sexual activity in women and hyperactivity of the thyroid, provide indications of the physiological mechanisms involved. ² Approaching from the

¹ Ibid., p. 240.

² *Idem*, *Man and Woman*, p. 219.

In this connexion it is also of interest to quote from the discussion of a noted gynaecologist on the possible influence of favourable emotional excitation as a factor in the mechanism of fertilization. Dr. Norman Haire, in a letter dated 1st February, 1926, contributes the following: "The normal reaction of the vagina is slightly acid, due to the presence of Lactic Acid, which is secreted by the *Döderlein's Bacillus*. This organism is a normal inhabitant of the vagina, and probably protects it against invasion by other, harmful, organisms.

Bland-Sutton and Giles state that the average acidity of the normal vagina is equal to 0.9 per cent of lactic acid.

Now this acidity is sufficient to kill, or at least injure, any spermatazoa coming in contact with it, and would thus tend to prevent fertilization. But during sexual excitement, the woman's sexual glands secrete a more or less copious *alkaline* fluid, which serves to decrease the acidity of the vaginal reaction, and to render it neutral or even faintly alkaline. It is in a neutral or faintly alkaline medium that the spermatazoa thrive best and have the greatest chance of surviving to fertilize an ovum.

From this it might seem that sexual excitement on the part of the woman is essential for, or at least favourable to, fertilization; and this factor might be invoked to explain the decrease in fertility observed in certain races where new environmental conditions decrease the *joie de vivre* and sexual appetite of the females.

But, on the other hand, every sexologist knows of numerous cases of frigid women who have been fertilized over and over again, in spite of complete lack of sexual desire or pleasure.

Hence, until further evidence is forthcoming, we have no grounds for regarding sexual excitement as *essential* for fertilization, though it is highly probable that it is a favourable precondition.

psychological side the biological function of emotion is well recognized.¹

In the process of organic adaptation emotional excitation serves to reinforce impulse and interest in achieving the end of motor action and maintaining a state of perseverance to overcome obstacles. The emotions, therefore, serve to indicate either that an instinct or affective tendency is being thwarted, or that it is achieving its respective end and is being realized in anticipation or in actuality. Thus, when the emotion is on the painful side, indicating the thwarting of an impulse or instinct, the excitement serves to stimulate the interest to overcome the obstacle. Continuous excitation of painful emotions must eventually indicate failure either to overcome obstacles or to achieve some form of compensation, which indicates on the psychological side a failure in self-adaptation. The reflex of this state is seen in disease, and in a gradual repression of interest in activities whose affective expression is baulked. When the interests affected involve the whole Social-sexual complex, it may well be imagined what little remains in the psychic life to stimulate a positive affective discharge so necessary to health and well-being. The symptoms of this condition of maladaptation are well shown in the familiar *insouciance* of natives under European subjection.

However responsive to disturbing influences the men of primitive communities are shown to be these disturbances appear to affect the women more profoundly, for the probable reason that, as Havelock Ellis shows, a disturbance in the sexual sphere of women is more potent in its influence on the whole organism than in men. Moreover "the greater predominance of the sexual system in women on the psychic side is clearly brought out in insane conditions".²

In view of these considerations we have reason to accept literally the idea often entertained and expressed by the women of "savage" races that they will not conceive although leading an apparently normal sexual life with their husbands, merely because they no longer wish to.³ I have heard a native chief

¹ Cf. Lloyd Morgan, *Animal Behaviour*, p. 293, and Drever, *Instinct in Man*, p. 161.

² Ellis, *Analysis of Sexual Impulse*, p. 251.

³ Missionaries and others frequently assert that sterility is brought about by the use of potent and mysterious contraceptives, based on the fact that herbs and all manner of concoctions supposed by the natives to have magical properties

account for the few children born in his village by explaining that the women no longer conceive because they no longer have any wish to conceive and the women themselves often believe they have this voluntary control over the physiological process of conception.

2

Innate Variations in Adaptability

Modern psychology has established, beyond all question, the importance and the place of *unconscious* cerebration in determining and influencing conscious thought processes. It has also been established that unconscious thought processes are related to differences of temperament, differences whose most satisfactory classification we owe primarily to Dr. Jung's observations in clinical psychology of the different types of neurotic reaction.

Starting from the contrasts presented by the exaggerated emotivity provoked by the inner conflict which marks the hysteric's failure in adaptation and the extreme apathy which is the precocious dement's reaction to his environment, Jung derives the two opposite types which in normal psychology he describes respectively as "extrovert" and "introvert". Hysteria and dementia præcox representing only the extreme manifestations under morbid conditions of the two reaction types, since the neurotic accentuates the characteristic traits of his personality. Thus Jung defines extroversion as the flowing out of the libido into the environment. In his relations to the object the subject lets his interest flow out into the objects of his environment and expend itself. Extroversion can characterize a person's thinking, feeling, or behaviour in relation to the object, and entails a dependence upon the object. It can be described as a centrifugal tendency of the libido. The opposite tendency of introversion is expressed in the relation of subject to object by an inward turning of the libido so that

are sometimes used to procure immunity from conception. No medical analyst to whom I have submitted several of these prescriptions, has, however, found any reason to credit these concoctions with any of their supposed physical properties.

interest in the object recedes towards the subject, the value attached to the actual object being secondary in motivation to its ideal or affective representation in the subject's psyche. It can be described as a centripetal tendency of the libido. Both extroversion and introversion may be, according to Jung, either more intellectual or more emotional, or can be characterized by either intuition or sensation. These four latter characterizations Jung terms *function-types*. It would seem that to these might usefully be added "kinæsthesia", for rhythmic movement is in some persons the dominating function whereby the libido discharges itself and the personality seeks emotional adaptation. When the extrovert or the introvert tendency is habitually dominant we may speak of an extrovert type or of an introvert type respectively. These are called in Jung's terminology *general attitude types*. The ascendancy of either tendency is balanced and compensated for by its opposite tendency in a more or less repressed and latent form, although the compensatory and secondary tendency may from time to time temporarily dominate the personality. Thus an intellectual introvert's compensatory and secondary tendency may function as sensational extroversion.

In pronounced types their distinguishing characteristics are easily recognized and begin to exhibit themselves at a very early age. The introvert expresses his emotions with difficulty, and so appears ~~outwardly~~ cold and guarded, he withdraws into himself, and because of his tendency to accumulate in place of discharging his emotions, the intensity of repressed passions are in danger of developing unduly into brooding anxieties, and phobias, and to favour introspection. Intellectual introverts develop a bent for philosophy, and display a preference for dealing with phenomena in abstract terms and by synthetic methods, for their interest is in the meaning of things rather than in the things themselves. Introvert artists are apt to be classics or among Orientals to display the abstract formalism brought to perfection in Chinese art.

The ~~extrovert~~, on the other hand, is hindered by no barrier intervening between feeling and its expression. He throws himself rapidly and easily into rapport with his environment. He is interested in objects and their relations rather than in their meaning. If a thinker the extrovert tends rather to be an empiricist and collector of data than a theorizer or philosopher.

When an artist he is often a "Romantic". The extrovert finds life much more acceptable and is much less ready to attribute hostility to his environment, but is always ready to join with expression of joyous impulse in the busy activities of his companions. He loves to be the centre of bustle and excitement and conforms at once to the changing emotions of a crowd. He is, consequently, considered sociable, and is apt to accept social values unquestioningly. There is a natural and typical extroversion in all young children and young animals. Dr. Maurice Nicoll describes it as "the natural capacity to extrovert spontaneously found in the great majority of young growing things during the imitative and play periods."¹ Although introvert tendencies can be unmistakably recognized in very young children indicating the type into which they will develop, it may be observed that age, maturity, and the specialized adaptations attendant upon growth and development tend to exaggerate the introvert tendencies of the introvert and in time to decelerate or inhibit the rapid and spontaneous extroversion of the extrovert.

Introversion always implies a relative emotional isolation and aloofness and a lack of participation in the feeling states of others who differ in the smallest degree from the subject, but since this characterizes the conscious attitude, a relaxation of the conscious attitude or a regression into subconscious states breaks down this isolation and favours participation in collective feeling states. Thus alcoholic intoxication, narcotics, and hypnoid states favour extroversion, response to collective emotional expression and consequently suggestibility. The extrovert is always more suggestible and in his emotional processes less differentiated, individualized, and more quickly adjusted to, the exigencies of a changing environment, and in this respect less specialized and more infantile; for like the child whose autogenetic development proceeds gradually from the more generalized and unconscious attitude of adaptation towards the more specialized, the extrovert remains more receptive and outwardly adaptable to the demands of his environment, achieving social adaptation by conforming to the objects of his interest by identification with their affective state, in place of seeking, as the introvert does, to procure adaptation by imposing conformance upon his environment.

¹ *Dream Psychology*, p. 140.

Thus considering the "general attitude types" as expressions on the psychological side of adaptive functions we may have reason for associating the introvert as the more specialized, segregated, and closer adapted type, with the *biologically* closer adapted, in-bred, and specialized stock, which suffers more rapidly (than its opposite type) lethal derangement when its environment is disturbed. This point will need further consideration, for it suggests that the psychological attitude types may form one of the mental criteria of ethnic discriminations. Dr. Jung has not yet, however, applied his type distinctions to ethnic groups, and speaking of European communities he says of either type "such men are found not only among the educated classes, but in every rank of society; with equal distinctness, therefore, our types can be demonstrated among labourers and peasants as among the most differentiated members of a nation . . . In the same family one child is introverted and another extroverted".¹ But this apparently random distribution of types in European communities might be looked upon as in keeping with the great heterogeneity in all characters physical and psychological of the very mixed and continuously mingling peoples of Europe. Nevertheless, the values, conventions, and organization of democratic European communities seem to point definitely to the increasing predominance of the extrovert type. If McDougall's suggestion that the Nordic character is introvert can be accepted, then the adulteration and gradual disappearance of Nordics would favour the general predominance of extroverts.

The suggestion that these temperament types may be applied as distinguishing traits of ethnic groups is, however, being put forward.² Thus McDougall suggests that the greater resistance and lack of adaptability shown by the Red Indian races of North America to European contact and control, as compared with the readier adaptability of the prolific and amenable negro races, may be attributed to a difference of psychological constitution. The negro being a pronounced extrovert and the Red races characteristically introvert. He points to the fact that the Negro in America has adapted himself to conditions imposed upon him and has multiplied in a way the Red man has failed to do. The Red has proved

¹ *Psychological Types*, pp. 413-44.

² Wm. McDougall, *National Welfare and National Decay*, p. 126 et seq.; *The Group Mind*, p. 111.

more resistant and dies out before he is able to submit. The Negro is more suggestible and expresses emotion with more childish abandon.

This difference of psychological constitution appears to distinguish the character of Negro collective expressions of emotion, as in Negro revivalistic meetings when a regression takes place to the level of hypnoid states of collective hysteria, where the responses of conscious individual differentiation are lost, from the character of the organized social gatherings of the Indians as seen in their dances. Here, a careful description shows us a disciplined co-operation to produce a previously planned collective act, the ritualistic features of which are preserved throughout. Emotional discharges are released as though by a studied and prepared effort and abruptly terminate as succeeding phases of the dance require different actors to perform. The whole performance often represents the dramatization of tribal tradition.¹ The greater tendency to introversion of the Red Indian in this instance accompanies a greater degree of blood segregation and inbreeding, whereas into the originally very mixed stock of the Negro the infusion of white blood has been so extensive that the "original type of the African has almost completely disappeared".²

Elsewhere similar contrasts suggest themselves, the full-blooded Polynesian showed himself rather more resistant and tenacious of his culture than the Melanesian. We must, however, be cautious in our observations of the present-day Polynesian, since the true Polynesian is now everywhere almost extinct. The old time Maori chief, conscious always that he appropriately represented one of the proudest people in the world, rigorously repressed his deepest emotions, fear and pain seldom appeared above the surface. When emotion was shown, such as expressions of defiance, rage, war-like excitement, or the grief displayed in mourning, it was paraded and flouted like a well-studied drill, mindful always of the effect it was to produce on the onlookers. "Sometimes," wrote Dr. Newman, "great Maori chiefs dropped dead from excessive excitement." It is always the emotion that is repressed, not the emotion allowed to flow out into active expression that is lethal, the introvert

¹ *Vide*, for instance, Miss E. C. Parsons' description of the Hopi Buffalo Dance, in *Mex*, Feb., 1923, No. 12.

² See Hoffman, *Race Traits and Tendencies of the American Negro*, p. 177.

suffers most from *repressed* excitement. Though the Melanesian appears, if we may provisionally generalize from rather inexact data, to be typically less introverted than the old type of Polynesian, the Papuan and the Australian tend by contrast to show an even greater capacity for the infantile type of extroversion. These contrasts in emotional tendency have, indeed, often been noted by observers, who have reported their impressions inevitably in vague terms. Thus Wallace remarks: "Every one who has had the opportunity of comparison, must have been struck with the contrast between the taciturn, even morose, aborigines of South America and the light-hearted talkative negroes. There is a nearly similar contrast between the Malays and the Papuans."¹

These contrasts in type have as yet been too little investigated in all their psycho-physiological bearings, to allow of a facile and dogmatic explanation of their biological function or their place in evolutionary development but it may yet be permissible to hold that we are dealing with constitutional variations in adaptive function, and moreover that there are reasons for recognizing the extrovert as the more generalized, less differentiated and, in a developmental or evolutionary sense, the more infantile and primitive adaptive attitude. Inversely we are led to recognize the introvert as the more differentiated and individualized; referring only, of course, to the organization and expression of affects. We have discussed the reasons for believing that specialized adaptation is favoured or produced by segregation and inbreeding, and counteracted by mingling, so it follows that we have here also a reason for supposing that the introvert tendency as a group characteristic will be favoured by segregation. This by no means implies that introversion is a sure indication of an inbred race, for an inbred race may also be characteristically undeveloped or undifferentiated in any traits of constitution, and the undifferentiated, infantile and more generalized affectivity we have held to be characteristic of extroversion. I am not, therefore, suggesting that segregation and inbreeding must necessarily tend to modify the extrovert characteristics of, for instance, an Australian aboriginal tribe.

The suggestion, here made for the first time, is provisional

¹ Wallace, *op. cit.* Darwin considered this passage striking enough to quote in his *Descent*, p. 260.

and tentative. It is to be hoped that in future investigations along these lines will be pursued more methodically and much further. Much could be done in establishing with greater certainty and clarity the types applicable to different groups and races by such methods as the analysis of dreams collected from large numbers of the populations of Pacific races, carefully distinguishing between the purer and the miscegenated stock.

Turning again to the question of the different types of reaction and of adaptability shown by primitive races towards European administrations, we seem to learn that the more undeveloped races such as the Australian, or the Negro (who are also, we have supposed, distinguishably extrovert), although apparently more readily adjusted to cultural innovations, less resistant and less tenacious of their own ideology, and therefore more relatively assimilative to introduced elements, sometimes fail none the less to achieve a sufficiently real adaptation in order to survive, and often die out as rapidly as the more resistant, introvert peoples. This difference appears to lie not so much in an unequal capacity to become adapted to any changes, for by the test of survival none may be shown, but in the quality and type of adaptability. The extrovert peoples appear less resistant to the ideological features of an imposed foreign culture merely because they are more indifferent to ideas, they are therefore liable more readily and with less distress to abandon their former beliefs and ideas and better able to transfer the emotional affects from the old symbols and attach them to substituted symbols, because their cultural complex is relatively less determined by, or dependent on, its ideational form; but they may suffer none the less just as acutely by the destruction of their culture as a whole, because in its destruction their adapted behaviour and wonted activities will have been destroyed. The more sophisticated introvert races, however, appear by comparison more sensitive to a remote contact with an incompatible culture, which seems to have the power to blight their lives even at a distance. Thus the Aua Islanders, a characteristically introvert race, seemed to lose heart from the time they became convinced that they were liable to be absorbed at any time by an irresistible alien power, and like the Maoris became dispirited when the *mana* of their race and of their chiefs seemed to have vanished.

3

Progressive and Regressive Adaptation

I have tried to show that all biological problems can be considered in terms of adaptation, that is to say, all growth and all behaviour can be viewed in terms of an organism's attempts to stabilize its relation to its environment. Where this is achieved either by a modification of the environment or a modification in the organism, the achievement is marked in the psychological sphere by pleasurable toned feelings, failure is registered by painful ones. Rignano explains the bio-psychological principle governing adaptation, in a clear and comprehensible way when he reduces all motivation and affectivity to the single fundamental tendency of the organism to maintain its "physiological invariability". Ultimately, the one and only "end" of all the needs and appetites is the "restoration of the stationary physiological state, which in some way or other has been disturbed or destroyed". Thus hunger is in the long run "nothing but the tendency to maintain or to re-establish the internal nutritive environment in the qualitative and quantitative conditions which enable the stationary metabolic state to continue".¹

Every animal endeavours to maintain itself within its normal physiological environment, whether of heat, of light, with respect to the force of gravity, or of humidity, etc. When, owing to any profound change in the environment, the normal state cannot be restored by any kinds of movements or displacements, the organism tends to take up a new stationary state consistent with the new external or internal environment, by the process of adaptation.²

To this primary need the conative factors which condition all human thought processes may ultimately be reduced. In the psychological sphere the individual confronted by the problem of having to cope with a condition of maladaptation which in consciousness is translated into feelings and emotions of pain, is faced with the alternative expedients of either attempting by greater conscious efforts to modify his environmental conditions or his own reactions, or else by a process

¹ Rignano, *Essays in Scientific Synthesis*, p. 91.

² *Ibid.*, p. 101. A. Giard and Lloyd Morgan might also be quoted in support of this view.

of dissociation to shut out the painful experiences from consciousness, consciously admitting only compensatory phantasies which offset the disturbing realities.

It is convenient to avail ourselves of the standard psycho-analytical explanations of these processes, and borrowing their terminology, to speak of the first expedient as *psychic regression to phantasy levels*, by shutting out of consciousness the recognition of pain, or sometimes by so distorting the painful affects that their source cannot be recognized, and to speak of the second as *psychic progression to reality levels* involving conscious adaptation. By the latter expedient pain is met at conscious instead of at subconscious levels. If we feel disposed or compelled to admit this we will also understand that all thinking and all motivation is conditioned by conflict between reality (recognition of pain) and phantasy (avoidance of pain), between desire and experience. A follower and expositor of Dr. Jung has explained the implication of the term *regression* in its psycho-medical sense so succinctly and concisely that I quote from his work. "Regression is a psychic act and, in the broadest sense, is a movement away from the adaptations of life back towards the condition of security which the infant experiences in its mother's arms, before it has discovered the responsibilities of this world. It is a movement towards the 'Mother'. This movement is a psychical one, ontogenetic in character, and though we cannot help thinking of it in terms of space and direction, it is more properly to be conceived of in terms of time and attitude. This *motif* is constantly found in dreams. Freud conceives of the 'longing for the mother' in the physical sense only—as the objective mother, and so he postulated the existence of the 'incest-wish' in every individual. The longing for bliss, for peace, for the ideal, may be put in concrete terms in the dream as a mother-wish, but it transcends the objective implication. Jung broadens the conception and puts it on a psychological level. (Cf. *Psychology of the Unconscious*, especially chapter on 'Sacrifice'.)

"There are three main ways of escaping from an intolerable situation—apart from running away: (1) The overcoming of the situation by a forward striving effort, accompanied by normal suffering. This is adaptation by progression and is normal and non-neurotic. (2) The temporary overcoming of the situation by repressing some part of emotions which it

arouses. This is quasi-adaptation by repression. Provided the repression is successful it is only potentially neurotic. When there is a partial failure in repression, conscious control is seriously interfered with, and normal adaptation to the tasks of the day becomes impossible. (The more evolved and sensitive the individual, the more inclined is he to repress, but the less likely is it to answer. Successful repression seems less easy for humanity to-day than it was formerly.) (3) Where the character of repression is extreme it amounts to regression, and in this case normal suffering is replaced by pathological suffering. This method is the exact opposite of adaptation by progression, the psychic movement being inwards, away from the level of reality-consciousness, towards a level of phantasy-consciousness. The movement may be slow or sudden; it may be arrested early or it may go so far that the patient becomes blind, deaf, dumb, and quadriplegic or psychically infantile, or both."¹

Clinical experience has made it clear that the tendency to adopt one or the other of these two antithetical processes, "progressive thinking towards reality levels" and "regressive thinking towards phantasy levels" will depend upon innate constitutional variations of individual types; but when we come to consider whether groups distinguishable in an ethnic sense, or in their cultural trends, can be said to be predisposed to the one or the other type of psychological function we face the very difficult question of how far any group is homogeneous in its psychic tendencies, or how far can it be assumed to be dominated by individuals of the one type or the other. We shall probably find, though the question is no doubt arguable, that some degree of characteristic uniformity in tendency is often apparent among fairly homogeneous ethnic groups, or groups dominated by distinguishable cultural trends.

The complexity of the subject necessarily renders any attempt at analysis difficult and a simple classification impossible. Mental differences are susceptible of being recognized under different heads: temperamental, emotional, and intellectual, but how far one category is determined by another may remain obscure. Besides differences in quality or kind, there are differences in intensity and degree. Also the distinction between

¹ Dr. Maurice Nicoll, the author of chap. viii, "Regression," pp. 100-2, in a symposium entitled *Functional Nerve Diseases*.

a more specialized type and its more generalized type from which it may be supposed to have evolved may in some respects correspond to differences between divergent types, while one type under the stress of abnormal conditions may show affinity to a different normal type. To take a simple illustration, a mature adult may exhibit under the stress of abnormal conditions the symptomatology of a normal child. Qualities exhibited at different stages of development which may, perhaps, be measured in terms of degree, merge into differences of quality.

The process of regressive adaptation towards phantasy levels or as we may more briefly term it, regressive thinking, will be discussed in relation to two problems.¹ We have to consider whether the more primitive or more infantile psychological type shows a more consistent tendency to avoid the reality-level and to seek pleasure or the reconciling principle in phantasy, sufficiently for this to be regarded as a characteristic trait, and secondly, to inquire whether this function may become the dominant motive of a culture, not necessarily primitive, in dealing with selected problems of existence which have become subject to particular repression.

Our discussion has led us to view phantasy as a compensatory function, which operates in consciousness, supplies phantom experiences of fulfilled hopes, attaining in imagination the ambitions which concrete reality threatens to thwart, and achieves by the easy method of relaxation and abandoned effort a solution to the situation in which we find ourselves ill-adapted. This type of psychological escape from the dangers of reality has been associated, though not exclusively, with infantile and primitive thinking tendencies.

We are familiar with the child's characteristic tendency to confuse products of imagination with objects of the outer world and to confuse dreams with the events of waking experiences.²

This distinction between subjective and objective experiences

¹ When the term phantasy is used in connexion with regressive thought a "complex" corresponding to no external and non-subjective facts or objects is implied. For this limited aspect of phantasy Jung prefers the term *phantasm* or uses the expression *passive phantasy* inferring necessarily a relative dissociation of the psyche. Cf. his *Psychological Types*, pp. 673-4.

² Cf. examples given by W. Stern, *Psychology of Early Childhood*, chap. xix, and Galton, *Inquiries into Human Faculty*, pp. 69 and 127: "In early life it seems to be a hard lesson to an imaginative child to distinguish between the real and the visionary world."

is very imperfectly felt by a small child. The strength of a small child's emotional discharges becomes its only test of "reality". An imaginative child engrossed in the fairy-tale or the game of make-believe experiences emotions of fear or affection towards an imagined object, an ogre, from which it flies in dread or a kind fairy which it approaches, as keenly as though these legendary creatures met them in the flesh. Its dream experiences are often confused with its waking experiences. When we detect a similar tendency to confuse subjective and objective data in adult thinking, whether among so-called "primitive" or "civilized" people we may class the thought tendency as infantile. Another characteristic of mental infantilism, in the sense in which psycho-analysts use the term, is the facility with which the infantile or neurotic mind disposes of an unacceptable idea by repressing it, at the same time deriving satisfaction by expressing the insurgent demand for recognition that the repressed idea makes in a disguised form.¹ Characteristic of infantile, neurotic, or regressive thought tendencies which also arise from the tendency to confuse subjective phantasy and objective reality, is the projection of memory contents of antecedent experiences as auditory and visual hallucinations. Here we may find parallels between the child, the primitive savage, and that large proportion of adults in our civilized societies who think on infantile levels when their thoughts or motives are strongly emotionally toned.² Dr. Morton Prince explains on these lines many recorded accounts of sudden religious conversion which "are full of instances of hallucinations occurring at the time of the 'crisis' and these—visions and voices—are often logical symbolisms of antecedent thoughts of the subject. By analogy with similar experimental phenomena we are compelled to interpret them in the same way and postulate these antecedent experiences as the casual factors."³

Lévy-Bruhl⁴ finds as the distinguishing trait of primitive mentality its collectivistic mode of action, its lack of

¹ Cf. Healy, *Mental Conflicts*, p. 26.

² Jung quotes two observers in support of his characterization of "primitive" thinking as a confusion between subjective and objective. Powell who observes: "La confusion des confusions dans la pensée des non-civilisés est la confusion de l'objectif et du subjectif." And Spencer and Gillen: "What a savage experiences during a dream is just as real to him as what he sees when he is awake, *Psychological Types*, p. 42.

³ Prince, *The Unconscious*, p. 193.

⁴ Lévy-Bruhl, *Les fonctions mentales dans les sociétés inférieures*.

individualized and relatively independent critical appreciation of objective data and consequent greater amenability to mass suggestion. This suggestibility is clearly favoured by regression to phantasy levels of thought, where the realm of the subjective and objective merge. This might be illustrated in magical and taboo systems in which ideal connexions are mistaken for real ones. This substitution of ideal for real underlies, for instance, the mental processes that give rise to those common practices in witchcraft in which a waxen or other image is used to harm an enemy, a practice familiar in European witchcraft which goes back to early Babylonia and Egypt and is still found in India and other parts of the world, or where a portion of hair or a piece of clothing or other discarded relic is used for the same purpose—the two magical procedures that Frazer groups under the headings of homœopathic and contagious magic.

It should, of course, be apparent to any student of social history, of the origin and development of moral ideas, or of magic and religion, that there remain in the most evolved and complex societies not merely evident vestiges of the past, but abundant persistent examples of the most primitive type of mentality. There are some who argue, as does for example, Dr. A. Goldenweiser,¹ a pupil and follower of Boas, that because "modern mentality is not characterized by the exclusive dominance of logic, when contrasted with primitive mentality, nor is the latter throughout a—logical", there is no means of distinguishing and no true distinction between the processes and distinctive traits of primitive mentality and the most evolved and matured mentality conspicuous only in the higher civilized societies. They appear to ignore the fact that these contrasts are most in evidence when we compare the mentality of the many and the few in the same civilized social communities, and that if it is possible to find criteria by which to distinguish variations in the mentality of groups within the same, often ethnically and even culturally mixed, community, evidences of distinctive mental characteristics are also likely to exist between widely separated ethnic groups.

The difficulty in distinguishing the traits of higher and maturer intellectual types from the more primitive is further confused by the frequency with which we discover primitive reasoning modes in intellectual types capable of intellectual

¹ Goldenweiser, *Early Civilisation*, p. 286.

processes that primitive mentality appears incapable of, for relaxation of intellectual effort and the influence of emotional conflicts may lead to a regression to primitive levels of thought which ultimately unite all thinking processes in a common pattern. Variations in intellectual capacity can only be distinguished by the heights to which it can reach, not by the evidence of the lowly and immature levels to which it may descend. Sir James Frazer wrote to Mr. Heape: "I suppose that Newton was the greatest scientific genius who ever lived; but he wrote drivelling nonsense about prophecy and the book of Revelation,¹ Faraday, another scientific genius of the first order was a Sandemanian. A. R. Wallace, Crookes, and Lodge dabble in the nonsense of spiritualism. Mankind from top to bottom is riddled with such inconsistencies."²

¹ Yet Newton, when dealing in his own subject, astronomy, is reported to have once remarked: "I do not deal in conjectures." David Brewster, *Life of Sir Isaak Newton*, p. 365.

² Quoted by Heape in his *Sex Antagonism*, p. 173.

X

PSYCHOLOGICAL FACTORS (*Continued*)

4

Differences in Intellectual Types

Without attempting anything like an exhaustive inquiry, attention may be called to some of the psychological aspects of logical processes that tend to distinguish the maturer from the more primitive mentality. In such an inquiry we face the initial difficulty presented by the absence of any satisfactory standardization of the criteria of intelligence. An attempt to provide a standard of intelligence has taken the form of postulating a factor called "general intelligence" or "general ability", the existence of which is due, according to Professor Spearman and others, to the "fact" that a "general factor" is supposed to underlie the correlation of various psychological functions and diverse aptitudes, which it is claimed the Binet or analogous tests measure. Most psychologists, however, have found in practice that even a high correlation coefficient between specialist ability and the "general factor" as indicated by the various mental tests can coexist with many and large discrepancies; in short that there is no true correlation. It is furthermore suggestive that some psychologists consider it probable that the exceptions showing no correlation become more numerous as children grow older and develop into adults¹; a consideration that suggests still further that specialized ability need not, and generally does not, develop in correlation with any "general ability" or "general intelligence", even supposing the existence of "general intelligence." Claparède, who prefers to avoid the use of the term "general intelligence" and to recognize instead *l'intelligence intégrale* manifested in the act of intelligence applied to the solution of a problem in

Cf. G. H. Thomson, in a paper read at the 7th International Congress of Psychology, Oxford, July, 1923, and published in *Brit. Journal of Psychology*, vol. xiv, pp. 230 et seq.

a new situation, defines intelligence as "un processus destiné à résoudre par la pensée un problème nouveau—processus de tâtonnement comportant trois opérations : question, hypothèse, vérification."¹ But in its higher forms reasoning thus defined can scarcely be measured by the mental tests. These considerations may suffice to suggest how little the mental tests in vogue, which profess to standardize the mental level of children to a maximum "mental age" of about sixteen years of age, are calculated to throw much light on the intellectual variations of minds highly specialized in different directions. We may indeed share the scepticism of Mr. Bertrand Russell who questions the possibility of testing anything by such methods except average intelligence.²

Educational and academic standards, as shown in our examinations and scholarship systems, still tend to confuse the mere absorption of knowledge with the discovery and use of knowledge, appraising facility in assimilation and memorizing as though indicative of intellectual ability. Instead of inculcating the art of applying knowledge, education, as generally understood, still stands for the vicious system of the absorption of unorganized knowledge. Spencer quoted Faraday's remark that the most common intellectual fault is deficiency of judgment, continuing : "Society, speaking generally, is not only ignorant as respects education of the judgment, but it is also ignorant of its ignorance."³

Arising out of what Spencer calls that "superstition which worships the symbols of knowledge instead of knowledge itself", the common limited idea of education confines it to knowledge gained from books. In place of first familiarizing the developing mind with phenomena, with objects of reality and their inter-relations, pupils receive formal instruction of definitions, rules and principles, which should only be disclosed finally, "as they are in the order of nature, through the study of cases," before their antecedent experiences have fitted them for it.

¹ E. Claparède, *Brit. Journ. of Psychology*, vol. xiv, p. 242.

² "I think that, if they (the psychological tests of intelligence, as applied to recruits for the American army during the war) were widely adopted, they would probably lead to many persons of great artistic capacity being classified as morous. The same thing would have happened to some first-rate mathematicians. Specialized ability not infrequently goes with general disability, but this would not be shown by the kind of tests which psychologists recommended to the American government." Bertrand Russell, *Icarus*, p. 53.

³ Herbert Spencer, *Education*, p. 49. Also see pp. 29-32.

So that the mental confusion produced by "teaching subjects before they can be understood, and in each of them giving generalizations before the facts of which they are the generalizations—what with making the pupil a mere passive recipient of other's ideas, and not in the least leading him to be an active inquirer or self instructor—there are very few minds that become as efficient as they might be".¹

"Intellectual progress is of necessity from the concrete to the abstract."² As Rignano asserts: "It is in the use of more and more general and abstract concepts that the whole evolution of reasoning consists."³ For knowledge of the concrete facts of experience must, as has been said, precede the synthetic generalizations based upon them. The capacity to deal with abstractions derived from the data of experience, which is implicit in the trial-and-error process leading to hypotheses and their subsequent verification, constitutes reasoning proper and is the true measure of intelligence.⁴ Evolutionary progress proceeds from the simpler to the more complex, and, in terms of adaptation, the simpler and lower nervous arrangements respond more invariably and uniformly to environmental stimuli than the more complex and higher; the lower are therefore said to be more stably organized than the higher, more fixed in their mode of action and less capable of varying responses to fluctuating conditions. Each stimulus evokes an appropriate reaction in the brainless frog, whereas it is impossible to predict the result that will follow the application of the stimulus with the entire animal: ⁵ "This distinction of higher and lower in nervous organization is correlated with a corresponding distinction of higher and lower in psychical processes. The discovery of a theory binding together a multiplicity of detached facts in the unity of a single principle is a higher mental process than the apprehension of the several facts in comparative isolation. The systematic combination of successive acts in subordination to a single end or principle of conduct is a higher psychical process than the performance of similar acts on the detached

¹ Spencer, loc. cit., p. 30.

² Ibid., p. 30.

³ Rignano, *Psychology of Reasoning*, p. 105.

⁴ This is even confirmed by experimental studies of the Binet test questions, which have indicated that the questions which are relatively abstract for their respective ages are the best measures of intelligence.

⁵ Cf. Michael Foster, *Textbook of Physiology*, quoted by G. F. Stout, *Groundwork of Psychology*, p. 30.

impulse of the moment. As the psychical process is higher, so the nervous process correlative with it is correspondingly higher."¹

We speak of reasoned conduct or thought as involving a higher mental process than an impulsive or instinctive mode of dealing with a situation or a problem, in that it involves a more complex, controlled, and variable mode of securing adaptation. It involves the capacity of subordinating means to an end, and of postponing the desired result, in the process of attention.

Rignano, in his analysis of the psychology of reasoning, reduces it to the postponement of action by a state of attention rendering possible the mental performance of a series of experiments leading to "discoveries". It is in the duration and intensity of "attention" involved in reasoning, that reason avoids falling into error or "illogicality".² In the process of "attention" Rignano sees the interacting and balancing influence of two affective and conative tendencies, of which "the primary urges the accomplishment of a certain action in order to satisfy a corresponding need, while the other, the secondary tendency, prevents the action and thus holds the former in suspense for fear of again encountering the same painful and disagreeable consequences which resulted formerly from too rapid an execution of the action itself . . . A similar secondary tendency consisting in the fear of falling into errors is also present in the thinker who pays great attention to what he thinks". This prevents the process of combining purely mental experiments from becoming a mere flight of imagination, having no correspondence to any expression of reality which constitutes "true and proper reasoning".³ Thus the state of attention prevents the mnemonic supply of sensory images, which the affective tendencies arising out of past experiences add to a new experience, from distorting perception into an "illusion" or "hallucination", which happens when an affectivity is aroused alone. A strong emotion, sudden fear, for instance, makes "attention" impossible, and tends to favour hallucinations. Great attention, also, counteracts illusory auto-suggestions, and protects against suggestion practised by others.⁴

¹ G. F. Stout, *ibid.*

² E. Rignano, *Psychology of Reasoning*, p. 95.

³ *Ibid.*, p. 94.

⁴ Rignano, *ibid.*, p. 94.

Constructive reasoning, then, controlled by the fear of being deceived implicit in the state of attention, abstracts from the phenomena of external reality. It guards against the confusion of subjective values, which select phenomena for their significance in relation to an "end", with the sensory apperception of phenomena which is recognized as "true" only in so far as it corresponds with "valueless" externalia. Constructive reasoning is thus impelled by a desire for the discovery of the truth, i.e. of casual relations—of the consequences of acts before beginning them. "Affective activity, seems to permeate all the manifestations of thought."¹ It is in this conflict between the affective and the conative tendencies that there arises the antithetic urges impelling the human reason to seek adaptation in one or the other of the two contradictory directions, outward and forward towards reality, or inward and regressive towards phantasy, these are the antitheses of Freud's pleasure-pain principle, or the conflict of Rignano's theory of the bi-affective activity of reasoning. "Thence," according to the latter, "arises the tragic and eternal opposition between our inner life, wholly impregnated with finalism, and the inanimate external world in which centuries of anxious research have failed to reveal any purpose whatever. And in this opposition between the essentially finalistic microcosm and the purely mechanical macrocosm lies the ultimate foundation of the age-long struggle between science and religion, the first constrained by reason founded on facts to deny finality to the universe, the second urged irresistibly to affirm it by the imperious demands of feeling."²

If we pursue our inquiry further into the discrimination of reasoning processes and the psychological types which exhibit different rational tendencies, we may be led to notice the place that inductive and deductive reasoning occupy respectively in the reasoning processes of different types of mentality and to inquire how far either of these logical functions may be correlated to other psychological processes and the place they should occupy in the order of evolution or complexity. It is probably far less the form of logical process used in reasoning that distinguishes the higher, more complex or superior mentality from the lower, since both induction and deduction involve

¹ Idem, "The Finalistic Aspects of Life," in *Psyche*, April, 1926.

² Idem, op. cit., p. 391.

no principles not found in the simplest forms of reasoning, than how it uses these processes and to what end.¹ In other words, what is important is the range of a mind's achievements, rather than the processes which may produce little or much. The distinction between the higher and the lower type of intellect is to be found in variations in methodological capacity, in the range, scope, originality and consistency of beliefs, which in highly organized minds form more integrated systems. At the same time it may be useful to observe that certain types of psychological functions appear to be correlated and some to be inversely related. Thus Jung associates sound inductive method with the "introvert" *general function type*. With this type of intellect "facts are collected as evidence or examples for a theory, but never for their own sake . . ." and proceeds, "Just as little as it is given to extroverted thinking to wrest a really sound inductive idea from concrete facts or ever to create new ones, does it lie in the power of introverted thinking to translate its original image unto an idea adequately adapted to the facts."² In so far as this almost suggests that the introverted type tends to think less on the reality levels than on phantasy levels this generalization gives a wrong impression, though the association of introversion and a tendency to use scientific inductions is probably sound. Jung's introverted inductive thinker would correspond to Rignano's "synthetic" thinker. Synthetic minds prefer comparison and the pursuit of new analogies, for every analogy presumes the recognition of equivalence with respect to a given end or result, so that by the mental act of discovering a new concept or a new analogy synthetic minds greatly increase our knowledge at a single stroke. Analytic minds, on the other hand, prefer long and complicated calculations, and progress slowly by means of continual trials of imagined experimental combinations; they appear to advance more prudently by taking only one step at a time.

It should be noted that in the determination of mental characteristics, which might be thought to be of a purely intellectual order, conative, affective and temperamental factors play a considerable part. "Every synthetic act, consisting in the sudden recognition of some analogy in relation to a given end, demands at the moment of its performance, an especial

¹ Cf. Wm. McDougall, *Outline of Psychology*, pp. 407, 411.

² Jung, *Psychological Types*, p. 481.

and exclusive interest in the question or the problem which this analogy or this equivalence is about to solve. In Mach's phrase 'it denotes' the preoccupation of the general in the contemplation of the particular. It follows that each synthetic act is eminently subjective and is generally achieved under the impulse of a unique and powerful affectivity. Each analytical act, or succession of analytical acts, which pursue the research in different directions among the manifold results to which the various purely mental experiments can lead, testifies rather to the objective desire on the part of the reasoner to enlarge the field of his knowledge in many directions, than to a pronounced and intense interest in a single problem to the exclusion of all others. Thus synthetic minds imply, as a rule, a more intense and more concentrated affective nature than analytic minds. The latter, because of their less affective intensity, are capable of a more diverse curiosity, more distributed over many things at the same time."¹

In this description of the synthetic reasoner we clearly recognize the introverted thinking type of Jung.²

We may here point to the fallacious nature of the observation sometimes made when the mental characteristics of one race are compared to another and the assertion is made that there may exist differences of temperament or of emotional disposition but none in innate intellectual ability, as though intellectual differences were not rooted in affective or temperamental differences. Thus Carr-Saunders, in considering the possible differences between the negro and the European, asserts: "There seems to be no marked difference in innate intellectual power; the differences are rather differences in disposition and temperament."³ We may now ask whether distinguishable mental traits can be grouped together or correlated so as to provide some indication of the essential features of mental or intellectual ethnic distinction.

It follows from what has already been said that the analytic mind tends to have recourse more frequently to the deductive method of demonstration, "owing to the greater need for analytics to set forth every induction explicitly, and in consequence of the pleasure with which they linger over the various

¹ Rignano, *ibid.*, pp. 163-4.

² Jung, *op. cit.*, p. 489.

³ Carr-Saunders, *The Population Problem*, p. 397.

particulars or qualities of phenomena or objects, they have recourse not infrequently to the syllogism, which synthetics, on the other hand, never employ. The synthetic act, by which new equivalences, previously unsuspected, are brought to light, can only be spontaneous and accidental."¹

Often deductive and syllogistic reasoning proceeds from premises derived from the *a priori* postulates created in phantasy. The famous ontological argument for the existence of God is a classic instance. Here it may be observed that the facility of deducing rapidly with logical exactness is by no means often associated with the originality or constructively synthetic genius which opens out new fields, but patient deduction may afterwards make use of and deduce from the new concept or discovery created by the synthetic act of another mind. Synthetic constructiveness presupposes the maximum of "attention" and concentration at the focus of consciousness, and at the same time a certain degree of inhibition of irrelevant memories; in fact, as we shall see later, it is necessarily antithetic to extensive memorizing powers, whereas deductive processes proceed with greater facility when the mind regresses from the focus of consciousness and attention and at the same time gains in powers of assimilation and suggestibility.² The reasoning powers exhibited under states of hypnotism, dissociation or automatism are often brilliantly deductive but they never produce a new scientific thought.

Rapid deduction from the intended or even unintentional suggestions of the operator and the evocation of memories of past experiences comprise the whole mental performance of the hypnotic subject.³ It is well established that the logical deductive powers, as also powers of mathematical calculation, the recall of apparently all memories of previous experiences and recognition of fixed laws are, in dissociated, automatic and hypnotic states, far beyond the capacity of the same mind in normal states of consciousness.⁴ On the other hand the

¹ Rignano, p. 266.

² Maudsley's "assimilative" minds "that discover slight and nice resemblances" are clearly the "analytics" as opposed to the "synthetics". Rignano, *op. cit.*, p. 265.

³ Cf. Miln Bramwell, *Hypnotism*, p. 144, and Professor Beaunis, quoted in reference to the logical and striking powers of deduction evinced by hypnotised subjects, p. 329.

⁴ Cf. also *Ibid.*, p. 411. These facts have also been confirmed by my own experiments in automatic writing.

essential fact about dissociated and hysterical states is their lack of synthetizing power, and the consequent disintegration of the field of consciousness into mutually exclusive parts.¹ Another group of antithetical abilities to which further reference will have to be made are discussed by Rignano. He opposes imagination and originality to erudition and memory, since too much erudition, which means the absorption and storing up in our minds of the ideas of others, not only increases beyond measure the memorized facts ready to thrust themselves into consciousness and hinder by their accumulated burden the discovery of new equivalences in which true originality consists, it also leads to the gradual substitution of the ideas of others for our own more personal and original ideas.² Thus highly original and creative minds (like for example, Lord Lister, who showed no particular promise in his examinations as a medical student), show no conspicuous talent when examined in the knowledge they have absorbed, and only show their genius when conducting original work on their own lines.³

A deficiency of memory tends to be associated with originality of thought, for a limited memory facilitates generalization and the discovery of the equivalences of phenomena, while the burden of vividly memorized details hinders the schematization or reduction of phenomena to those attributes which make them equivalent in respect to an end.⁴ The facility for vividly memorizing details depends largely upon powers of visual imagery which, as Galton also has shown, are poorly developed among those who deal with highly generalized and abstract thought. As a consequence Galton found that scientific men, as a class, have feeble powers of visual representation.⁵ He considered that a habit of suppressing mental imagery, characterize men who deal much with abstract ideas, and as the power of dealing easily and surely with them is the surest criterion of a high order of intellect, the visualizing facility tends to become starved by disuse among philosophers.⁶ Galton also discovered that the power of visualizing is higher in the female sex than in the

¹ Cf. also *ibid.*, p. 417.

² Ribot, quoted by Rignano, *op. cit.*, p. 279.

³ *Life of Lord Lister* by G. T. Wrench. Charles Darwin and Herbert Spencer are two further examples of brilliant synthetic minds who were not considered brilliant students.

⁴ Rignano, pp. 280-1.

⁵ Galton, *Inquiries into Human Faculty*, p. 60.

⁶ *Ibid.*, p. 76.

male, and slightly higher in boys than in men, but after maturity is reached, the further advance of age does not seem to dim the faculty.¹

To sum up, I have tried to show that mental and intellectual discriminations are not capable of being clearly and intelligibly reduced to some convenient "general intelligence factor", but that a complex of affective and intellective factors interact and condition each other, and are moreover bound up with variations in the type of mental adaptation. Distinguishing traits and qualities that characterize the mentality and intellectual abilities of individuals appear, however, in varying degrees antithetical. Further, we have seen some reasons for supposing that these antithetical distinguishing tendencies are capable of being in some measure related to stages in evolutionary or developmental progression, in the sense that one of each pair of antithetical traits appears the more infantile, primitive, and simple, and the other the maturer and more complex, or that the one is the more generalized and the other the more specialized. Conspicuous in their determining character are the antitheses between the phantasy or regressive tendency and the "reality" and progressive; between assimilative facility and creative and original thought; between memory and the more concrete and the more abstract thought tendencies; between deductive and inductive tendencies; between extroverted and introverted attitudes; between analytic and synthetic thought. Since individuals and families differ in respect of many of these traits we have no reason for supposing that races do not also in some of these respects show group differences, nor even that the sexes show no differences in mental tendencies, the female being mentally, as she is also anatomically and physiologically, the more generalized, closer to the racial stem, less divergent from and closer to the infantile.

The question, for instance, whether there are radical and essential differences of an innate and constitutional nature between the mind of a South African Bantu native and that of a European, has for long been a subject of discussion. In view of the preceding analysis we may now briefly review the experience of practical educationalists in relation to the foregoing scheme.

It is to be observed, however, that inquiries into characteristics

of Bantu mentality have often been undertaken less from a scientific desire to arrive at an impartial psychological critique than with a more or less conscious desire to exploit in an economic or utilitarian way the native. Thus in the "Report of a Select Committee of the House of Assembly of the Cape Colony on Native Education" (Capetown, August, 1908), the committee are impressed that "Witnesses are generally agreed that education has the effect of making the native more intelligent, more civilized, and more loyal, and of *increasing his wants*".¹ Of more importance to the Committee-men was their assumption that, in the consumption of goods, what they describe as the "educated, civilized and Christianized native" is in every way a very much better commercial asset to the country.² Such generalizations tell one, of course, nothing about Bantu mentality, beyond the fact that it may be influenced by the type of educational influence we bring to bear upon it in such a way that it may be made commercially profitable to us. It shows, moreover, how little the psychological problem of intelligence was understood by those who discussed it.

Of greater interest are some observations contained in an article by the Rev. A. T. Bryant and Dr. C. G. Seligman, F.R.S., on the "Mental Development of the South African Native", in the *Eugenics Review* (vol. ix, pp. 42-49). The article adduces the evidence of a teacher with thirty-three years' intimate intercourse with the Zulu-Kafir tribes, engaged in teaching both European and Bantu boys, at the same time, in the same classroom, and in teaching under similar conditions in Zululand native boys and native girls of all ages up to and beyond 20. The definite conclusion is arrived at that some innate differences exist between the average adult male Bantu and the average adult male European. In some respects the Europeans and in others the Africans show superior ability.

Comparing the male children of the two races these authors find (a) greater precocity or a more rapid development of the African up to about 12 years of age, succeeded first by a gradual arrest, then by an actual decline of energy and decrease of "mind-power" to a point below that already reached, while the European boy shows a much slower and more gradual development of the intellect from about the sixth year through

¹ *Report*, p. vi.

² *Ibid.*, p. 85.

the puberal period (at which a slight temporary arrest may take place) until somewhere after the eighteenth year, the maximum of "mental power", to which the average African never attains, is reached. (b) No appreciable difference is discernible, either in the development of the mental faculties or in their power, between the female sections, whether children or adults, of the two races.

When we come to the qualities involved in this comparison we are given the following antitheses. In the province of "reflection, judgment, comprehension or of conceiving, the African is everywhere hopelessly outdistanced by the European". In the province of memory and of imitation the African is accorded the honours. It is also claimed for the African that he is superior in "intuition" (which is defined as an immediate perception of truth without any exercise of the reason). In illustration of this his remarkable sense of locality or direction is mentioned, and also his strange intuitions or presentments of impending ills and occurrences in distant places, powers especially developed in the sorcerers (*abattigoma*) who exist in great numbers in every African community. These powers are especially noticeable in women, who "for the most part" profess clairvoyant powers.

Here we may note that the Bantu differs from the European conspicuously in just those qualities in which European girls differ from European boys, and female mentality generally differs from the male. In memory, assimilation, suggestibility, and precocity the female excels, in judgment, reasoning originality and in abstract thought, the male. Paul Lafitte observed that in general women were more receptive for facts than for laws, more for the concrete than for general ideas.¹ Investigators seem agreed that boys are superior to girls in judgment and reasoning and powers of analysis, while in most other respects schoolgirls seem to be either equal to schoolboys or superior. "The general result," according to the observation of Havelock Ellis, "is that during school life girls stand better than boys of the same age in most measures of general intelligence. The girls are decidedly better in the majority of tests of memory, which counts for so much in most branches of school work, and it is also generally held that they are more impartially

¹ Quoted, by Iwan Bloch, *The Sexual Life of our Time*, Engl. trans., p. 75, who also lays stress on the greater suggestibility of women. See also the several authorities quoted whose investigations conform as to the mental distinctive tendencies of the two sexes, pp. 70-7.

industrious. It must at the same time be pointed out that these qualities are by no means necessarily the highest qualifications for success on a wider stage of life. Memory, as Josiah Morse has found, is the chief aptitude in which coloured children excel, while they are inferior to white children, as girls are inferior to boys, in judgment and reasoning. Special aptitude, again, so important for future life, is not correlated, as Ivanoff found at Geneva, notably in regard to drawing with general intelligence or impartial industry."¹

At the prepuberal ages (between 6 and about 12) it is generally held that the "general intelligence" of native boys appears to be even superior to that displayed by an average class of European boys of similar age. Great stress is commonly laid on this frequently made observation by those who are intent on proving that no fundamental or ineradicable racial differences in mental constitution exist; we may, however, note that these judgments are based only on such data as the primary schools can produce. From the very nature of education at these ages only certain qualities can be tested. That is to say, the judgment must be based upon results of a test in the elementary subjects that form the curriculum, such as reading, writing, simple arithmetic, geography, history, grammar, languages, drawing, and singing. Excellence in these subjects tests almost exclusively assimilative, imitative, and retentive or memorizing qualities—the very qualities in which it is admitted that the African excels—while the critical and reasoning qualities which develop last, and in which the European eventually proves superior to the African, can scarcely be tested in Bantu or in European children at these ages at all. Even at later ages, from the time of puberty onwards to the age of 18 or 20, it is often forgotten how almost exclusively the assimilation of knowledge, which is the sole road to success in the higher grades of schools, in the winning of scholarships and mainly even in the winning of academic honours at universities (for the African native has often shown himself capable of holding his own against White rivals when sent to the universities of Europe or America in examinations in medicine, law, or arts), depends on memorizing and assimilative capacity. "Whenever the attainment of knowledge depends upon the imitative faculty or upon mere memory—and a good deal of the syllabus even in the higher standards of the primary school

¹ Havelock Ellis, *The Philosophy of Conflict*, p. 173.

will still be of such a nature—there the native will still remain, at the very least, the White boy's equal."¹

Finally, we may add, these conclusions are confirmed by the great bulk of investigators who have been in a position to express an opinion on the salient mental traits of the two races.²

5

*Puritanic and Hellenistic Culture-Trends*³

The important changes that take place in the evolution of *culture-form*—"civilization"—would be the term usually employed—result from the eventual dominance of opinions, ideas, and beliefs, disseminated and organized by means of words, and acting upon and directing sentiments.⁴ Le Bon remarks that the power of words is linked to the images which they evoke and is quite independent of their real meaning, so that those that are the vaguest and least capable of precise or clear definition are often for this reason the most powerful and effective. He quotes Taine's remark that just by invoking those most popular words "liberty" and "fraternity" the Jacobins were able to institute a despotism worthy of Dahomey, a tribunal that rivalled that of the Inquisition, and human hecatombes that compared with those of ancient Mexico, and, adds Le Bon, "on élèverait une pyramide plus haute que celle du vieux Khéops avec les seuls ossements des victimes de la puissance des mots et des formules."⁵ But words and phrases acquire no power to direct the minds and behaviour of men unless they symbolize in some way objects capable of evoking affective tendencies, aspirations, and fears, deep-rooted in man's constitution. We are all, however, aware that the same abstract words, words like Liberty, Justice, Freedom, Equality, Beauty, Morality, Christianity, or Revolution, commonly used to denote the aspirations and ideals of our social and individual life in modern

¹ Refer to Seligman and Bryant, loc. cit., p. 48.

² See for instance the opinions collected on this subject by Carr-Saunders, *Population Problem*, pp. 390-7, and Henri Junod, *Life of a South African Tribe*, vol. ii, p. 275, on the memorizing powers of Bantu natives and the excellent commentary on the education of the Kafir by Dudley Kidd in his *Kafir Socialism*.

³ This section under the title "The Puritan Proscription of the Pagan World" was published in *The Review of Nations* (Geneva), March, 1927.

⁴ Sentiment is here used, more or less in the technical sense in which McDougall and Shand use the word, or in which Bernard Hart uses the word "complex" to mean an organized system of affective dispositions grouped round certain objects which evoke them.

⁵ Le Bon, *La Psychologie des foules*, p. 84.

Europe, evoke very different and even opposite sentiments and emotions. But since too much importance is usually attached to the mere reiteration of the word or symbol itself, the conflicting meanings behind the symbol rooted in individual tendencies are too often ignored. It fails to be understood that such commonly used and accepted words could only have identical subjective meanings in a society which showed a *community of values*, that is to say in a homogeneous culture. In a mixed and heterogeneous culture like our own, such words represent merely the battle-cries of warring culture-trends striving for mastery.¹ A uniform and harmonious culture-form cannot exist without community of value, and this implies that the terms of value, words denoting good or bad, desirable or undesirable, have reference to the same instinctive or affective tendencies. In Europe, and particularly in English-speaking countries, we see the apotheosis of the dissolution of culture and we incongruously dignify the disintegration of culture-form with the title of "civilization". The seeds of this disintegrative movement may be traced to the revolutionary movement, born two thousand years ago among Jewish mendicants, which gradually extinguished the pagan culture of Rome and judaized the whole of Europe; its historical root in Europe can be found in "the pure and humble religion which gently insinuated itself into the minds of men, grew up in silence and obscurity, derived new vigour from opposition, and finally erected the triumphant banner of the Cross on the ruins of the Capitol".²

The Reformation and the Renaissance, again, were the culminating outbreaks of two opposed and warring culture-trends, tendencies which for convenience I shall refer to as "Puritanic" and "Hellenistic".³ To confuse the spirit of the Italian

¹ Cf. Nietzsche, *Der Wille zur Macht*, i, Aph. 80: "Christentum, Revolution, Aufhebung der Sklaverei, gleiche Rechte . . . alle diese grossen Worte haben nur Werth im Kampf, als Standarte: nicht als Realitäten, sondern als Prunkworte, für etwas ganz Anderes (ja Gegensätzliches!)."

² Gibbon.

³ The words Hellenistic, Hellenic can be used to describe a general culture type rather than the national culture of a particular people. Even in reference to Classic Greece the term Hellenic can appropriately be used to describe an ideal of culture rather than to describe the culture of a particular people at a particular time. Thus Professor Gilbert Murray writes: "The new spirit of classical Greece, with all its humanity, its intellectual life, its genius for poetry and art, describes itself merely as being 'Hellenic'—like the Hellenes. . . . But where no one's ancestry would bear much inspection, the only way to show you were a true Hellene was to behave as such: that is, to approximate to some constantly rising ideal of what the true Hellene should be. . . ." *Four Stages of Greek Religion*, pp. 58, 59.

Renaissance with that of the German Reformation is to identify opposites. The Reformation, a movement in which religious, social, and political elements are inextricably mixed, was, as Nietzsche said, the very antithesis of the Renaissance. "The German Reformation stands out as an energetic protest of mentally arrested minds who were by no means tired of the mediaeval *Weltanschauung*, and who noted the signs of its dissolution with profound misgiving instead of with the rejoicing that would have been appropriate . . . They delayed for two or three centuries the awakening and mastery of the sciences . . . The great task of the Renaissance could not fructify, this was prevented by the protest of the contemporary backward-moving German spirit."¹ If it is permissible to use the word "Puritanic" as a generic term to describe a tendency that in some form or other has been liable to influence all peoples and all cultures, it must be given a wider significance and meaning than would be conveyed by relating it exclusively to that body of religious and political revolutionaries to whom the term Puritans was first applied in sixteenth century England. But those men of "sour and atrabilious temperament" are well entitled to give a name to a tendency which, owing to its supreme influence upon the cultural evolution of Europe, we must try at all costs to understand. In no country has the victory of this spirit been more complete than in England, England the former battle-ground of the Puritan-Dionysian culture-clash, for here more effectually than elsewhere the spirit of the Hellenistic renaissance was stamped out. To digress by taking an excursion into the history of the culture-clash in Europe would take too long and lead us too far away from our subject. But in order to understand the nature of the influence of European culture upon pagan peoples we must at least attempt to define what we see as the dominant traits in this European culture, and particularly in English culture; for what geographer with the map of the world coloured red before him could deny our English claim to be the greatest colonizing and the greatest proselytizing people in the world? Have we succeeded in concealing from our neighbours our unshakable belief that we wish English culture and English morality and religion to be regarded as the authoritative and the true standard for the rest of mankind,

¹ Nietzsche, *Menschliches Allmenschliches*, i, Aph. 237.

not only because the happiness of England, but the happiness of mankind will thereby be best attained ?

Social anthropologists, modern students of Human Culture, suffering from an understandable timidity and the desire to conduct their discussions within the safe and licensed enclosures reserved for the irrelevant humbug of "purely academic interests", are prone to avoid all attempts to analyse or understand the psychological implications in their own nation's religious and cultural tendencies, as though such an undertaking were not the first prerequisite in any discussion of the effects of the contact of European with pagan cultures, or as though culture form could be taken out of its religious context. Actually, as we really know well enough, all culture wars have been conducted in religious clothing, and no conquering or proselytizing people have neglected the simple precautions of enlisting a sympathetic and omnipotent God on their own side. Religious ideas and sentiments interact with all social and political ideas so that there is no specific distinction except in its definition and proclaimed aims between religious and secular behaviour. As Professor Pierre Janet puts it "Religious feelings are only the ordinary human feelings directed to religious ends; all religious behaviour seems but a special case of ordinary social behaviour, and in another passage, "religious behaviour is exceedingly complex, for it has been complicated, century after century, by superimposing philosophic, and even scientific, ideas upon a small group of simple feelings that exist in primitive man."¹

The triumph of the puritan movement directed the course of all subsequent social evolution in England and left its stamp upon our social organization, legal system, ethics, and art, but its psychological ancestry takes us much further back, and in its most general features is specific to no national or racial soil.

It may seem arbitrary, and even historically anachronistic, to use, without reference to time or region as general antitheses, two terms so usually linked to their respective periods as Hellenism and Puritanism.

It may need a far more adequate and exhaustive treatment of the subject than I could attempt to give it here to justify my antitheses according to the high standard of scholarship. My humbler ambition will rest satisfied if I attain intelligibility.

¹ Janet, "Social Excitation in Religion," in *Psyche*, October, 1926.

If we seek what significant common features, or basic common values, can inhere among such different doctrines as those of the Puritans of the Reformation, of the Protestant churches of to-day, of the eleventh and twelfth century heretical sects known collectively as Cathari, of the Gnostics, of the Flagellants, of the self-mutilatory sects and monastic orders of the Church of Rome, of the Essenes, of the Manichaen sects, of Buddhist ascetics, of Greek Cynics, or of Christianity of the Gospels and in fact in all religions where asceticism is preached as an ideal state, we find indeed, irrespective of all doctrinal and other divergencies, a common principle and a similar general attitude toward Life. Implicit in that attitude there must be a certain hostility towards, and dread of, Life which Nietzsche saw as the dominant motive in Christianity when he opposed it to the Hellenic paganism which he symbolized by the name of the Greek God Dionysus. But if there is in all ascetic idealism an hostility to Life or a withdrawal from Life through nausea or surfeit of it, there is, at the same time a very important difference between the asceticism of a Hindu or Buddhist and the ascetic doctrine of a Christian puritan. The motives of these two views of asceticism differ. The Buddhist seeks deliverance from pain, from all passions and interests whether on his own or another's account, whereas the Christian (this tendency is most marked in the Protestant and the Puritan) seeks always to have his passions and interests shared by or imposed upon others. Their understanding also is opposed, the greater realism of Buddhism seeks only an escape from the reality he recognizes, in the Christian motive reality must be transformed (into another worldly reality) or denied, while sins must be invented to support the structure of theology and as fighting weapons. Eastern asceticism, above all is not ethical, the Eastern ascetic seeks to profit or avoid suffering by his abstentions not to impose them on others.

Schopenhauer wrote with profound understanding on asceticism, and he paid homage to the ascetic ideals of Buddhism and of early Christianity. Schopenhauer, who in practice treated sexuality as a personal enemy including its tool woman, wished to escape from torture, but, observed Nietzsche, he needed enemies to entice him back to existence.¹ "Not only religions of the East but also true Christianity, has throughout that

¹ *Zur Genealogie der Moral*, Aph. 7.

ascetic fundamental character which my philosophy explains as the denial of the will to live; although Protestantism, especially in its present form, seeks to conceal this."¹

The ascetic tendency is the kernel of original Christianity. Throughout the Gospels we find as the first doctrine a recommendation of pure celibacy, and the glorification of perpetual virginity, which Schopenhauer understood as the most important step in the denial of the will to live. Marriage, consequently, in true Christianity, is regarded merely as a compromise with the sinful nature of man, as a concession, something allowed to those who lack strength to aspire to the highest, an expedient to avoid greater evil.² Hence arises the conception of purity as abstention from sexual functions, from all sensuous participation in the life of the flesh; it becomes a war against the most tenacious instincts of nature, man's war against himself. The Fathers of the Church, Justin Martyr, Origen, Lactantius, Tertullian, Jerome, and Augustine, invariably refer to all sexual relations as inevitable defilements, and based their doctrine on the New Testament texts.³

Tolstoy rightly interpreted the doctrines of original Christianity in his uncompromising statement that marriage is an un-Christian institution. "Jesus never married, neither did his disciples, and he never instituted marriage; but appealing to men, some of whom were married and some not, he said to the unmarried that they had better not marry; and to both he said that the chief sin consists in looking on woman as an object of pleasure . . . From this position the following practical moral deductions naturally ensue: To regard marriage as a sin demanding redemption. The redemption from sin consists in both parties liberating themselves from lust . . . Let everyone strive not to marry, but having married, to live with one's wife as brother and sister."⁴

The essential in Christianity as also the essential in all doctrines of asceticism, as Schopenhauer saw, is in its profoundly pessimistic rejection of Life, the desire to escape from Life and the consequences and dangers of Life, which we see inevitably arise from all participation in it, inseparable from the experience

¹ Schopenhauer, *The World as Will and Idea*, Haldane and Kemp's translation, iii, p. 136.

² *Ibid.*, p. 437.

³ e.g. Matt. xix, 11; Luke xx, 1; Cor. vii, 1-11; 1 Cor. v, 5; Romans vi, 19.

⁴ Tolstoy, *Social Evils and their Remedy*.

of all passions, joys no less than sorrows. In all this the great counter principle was the optimistic acceptance of Life, the pain equally with the joy, that was the essence of Greek paganism, the brave and scornful challenge to the ascetic confession that "our state is both exceedingly wretched and sinful".¹ Christianity is therefore described by Schopenhauer as "the doctrine of the deep guilt of the human race through its existence alone, and the longing of the heart for deliverance from it, which, however, can only be attained by the greatest sacrifices and by the denial of one's own self, thus by an entire reversal of human nature".²

The ascetic in order to renounce life must fear it, or turn away from it with nausea after an extravagant surfeit of it—as Augustine, Tertullian, and Tolstoy. He must renounce his will, his personality in order to make life easier. "We have renounced our own will once and for ever, and this is easier than only renouncing it occasionally as it is also easier to give up a desire entirely than to keep it within bounds."³ "There arises within the ascetic a horror of the nature of which his own phenomenal existence is an expression, the will to live, the kernel and inner nature of that world which is recognized as full of misery."⁴ Such a state of inversion of the positive and normal orientation towards the outer world, such a disease of the will or renunciation of the will to live, fastens with peculiar fear and hostility upon all manifestations of the sexual impulse—the most powerful enticement to live, to suffer the consequences of living and to accept life. The attitude towards sex has therefore always been of the greatest importance in doctrinal Christianity, and this doctrine is essentially the doctrine that arises out of asceticism. The ascetic as Schopenhauer reads his soul in himself must disown the misery-bringing nature already expressed through his body, and in denying it he appears in open contradiction to his phenomenal existence, he ceases to will anything and seeks to confirm in himself the greatest indifference to everything. His strong and healthy body expresses the sexual impulse, but he gives the lie to the body. Voluntary and complete chastity is the first step in asceticism or the denial of the will

¹ Schopenhauer, loc. cit., ii, p. 372.

² Ibid., iii, p. 448.

³ Nietzsche, *Menschliches Allzumenschliches*, i, Aph. 76.

⁴ Schopenhauer, i, p. 490.

to live.¹ Self-mortification and self-inflicted torture and constant privation are resorted to in order more and more to break down the will, which is recognized and abhorred as the source of the ascetic's own suffering existence and that of the world, so that death is at last welcomed as a happy release from all manifestations of will and the longed-for deliverance, for so long as the body lives, the whole will to live exists potentially,² constantly striving to become actual.³ Finally, according to the ascetic view dying is to be regarded as the real aim of life, while all the striving manifested in life was in vain, idle, and self-contradictory effort.³

If speculation were permissible we may be inclined to inquire whether this apparently fundamental conflict and opposition between a philosophy expressing a will to live and a philosophy expressing a will to die—an urge towards extinction or nihilism, can be rooted in some primary instinctive tendencies, one towards Life and one towards Death, battling for mastery? Freud has, indeed, surveyed the ground in a speculative way when he recognizes "that the ruling tendency of psychic life, perhaps of nerve life altogether, is the struggle for reduction, keeping at a constant level, or removal of the inner stimulus tension (the Nirvana principle, as Barbara Low terms it)—a struggle which comes to expression in the pleasure-principle—is indeed one of our strongest motives for believing in the existence of death-instincts."⁴ Freud takes as his starting point the hypothesis of two instinctive tendencies striving with each other from the beginning, and distinguishes between the ego-instincts, which he later calls death-instincts and the sexual instincts which he describes as life-instincts. The libido, he maintains, tends constantly to be withdrawn from the object and be directed towards the ego in the process of introversion. This regressive tendency towards the ego (death-instincts) which he describes as the pleasure principle subserves the function of rendering the psychic apparatus as a whole free from any excitation, or to keep the amount of excitation constant or as low as possible. He further suggests that the function he describes in these terms may partake of the most universal tendency of all living matter—to return to the peace of the inorganic world.⁵

¹ Loc. cit., i, p. 491.

² Loc. cit., i, pp. 493-506.

³ Ibid., iii, pp. 463.

⁴ Freud, *Beyond the Pleasure Principle*, English trans., p. 71.

⁵ Ibid., pp. 64, 65, 67, 81, 83.

As yet we have dealt only with the most general and fundamental aspects of ascetic systems, among which it can hardly be denied original Christianity is found, we have not yet, however, refined our conception of Puritanic culture trends, particularly as they are to be recognized among European peoples. This brings us to the essential difference in the practice and theory of asceticism in the East and that of Europe. One important difference seems to be that Hindu asceticism, for instance, is individual rather than institutional, practised for personal motives and for the super-human powers or the deliverance that self-mortification is believed to be the surest way of obtaining, whereas European and Christian asceticism is preached as a duty or an ideal for all, a supremely meritorious act especially pleasing to a self-immolatory God who rewards those who practise it and withholds rewards from those who do not, in short it is institutionalized. It follows that in this as in all other aspects, the religion of Europe is far less tolerant than the religions of the East. Christianity, in this she resembles Islam, has never been tolerant, whereas the spirit of pagan religions is tolerant and in spite of the reiterated professions of tolerance of the Churches of to-day Christianity is, in fact, to-day no more tolerant when she has the power to coerce than when she first rose to power.¹ It is no exaggeration to state that Christianity and Islam are the two most intolerant religions known to the history of the world. Sir Charles Eliot in his careful study of Hinduism writes: "The relations of religion to philosophy, to ethics, and to the state, as well as the relations of different religions to one another, are not the same as in Europe. China and India are pagan, a word which I deprecate if it is understood to imply inferiority but which if used in a descriptive and respectful sense is very useful. Christianity and Islam are organized religions. They say (or rather their several sects say) that each not only possess the truth but that all other creeds and rites are wrong. But paganism is not organized: it rarely presents anything like a church united under one head: still more rarely does it condemn

¹ Cf. M. Beer's *Social Struggles in the Middle Ages*, trans. by H. J. Stenning, p. 71. "The Christians soon forgot the principles of religious toleration, which they had so loudly proclaimed during the early persecutions. Demands were put forward to prohibit paganism, to restrict Judaism by law, and to punish heresies by death. S. Augustine was of opinion that it was permissible and seemly to apply corporal punishment to heretics."

or interfere with other religions unless attacked first. Buddhism stands between the two classes. Like Christianity and Islam it professes to teach only true law, but unlike them it is exceedingly tolerant and many Buddhists also worship Hindu or Chinese gods."¹

Christianity in the essential primary respect of asceticism taught only what Asia, from whom Europe learned the doctrine, knew long before; but the people of Europe, in absorbing the life-rejecting tendencies of Eastern asceticism, transformed and adapted them. The active and restless temperament of European and particularly northern European people, could never have truly assimilated a doctrine of quietism and resignation that contradicts their natural temperament without, at any rate, the preparation imposed by accumulated suffering and a long spiritual sickness, or else by the modifying process of introducing an element of discordant contradiction in giving expression to it. This implicit contradiction is revealed, for instance, in the importance attached by Christianity to other-worldly and after-death compensation and reward, the idea, as it is popularly expressed, that people may, by taking certain precautions, by professions of "faith", by seeking or suffering austerities and hardships in this world, make up for it in the "other-world", when, moreover, the good time they will then be able to enjoy will be to no small extent enhanced by a contemplation of the "hell" to which their enemies will be consigned².

This idea of heavenly compensation for present miseries, a deferment of pleasures hoped for, and the fulfillment of the "wish-world" which plays so great a part in Christianity and none in true Buddhism, shows how little the pure ascetic elements of Christianity are compatible with the European temperament, and how imperfectly in its professed renunciation of life, in its will for extinction, loss of personality and *Nirvana*, it has absorbed the true renunciatory philosophy of Hindu or Buddhist asceticism.

¹ Eliot, *Hinduism and Buddhism*, i, p. lxix.

² Compare e.g. the saying of Thomas Aquinas (quoted by Nietzsche, *Zur Genealogie der Moral*, p. 332). "Beati in regno coelesti, videbunt poenas damnatorum, ut beatitudo illis magis complacet." Cf. also the saying of Tertullian, "Expect the last and eternal judgment of the universe. How shall I admire, how laugh, how rejoice, how exult, when I behold so many proud monarchs, and fancied gods, groaning in the lowest abyss of darkness; so many magistrates, who persecuted the name of the Lord, liquefying in fiercer fires than they ever kindled against the Christian; so many sage philosophers blushing in red-hot flames with their deluded scholars. . . ." Quoted by Gibbon, i, chap. 15.

In psychological language the sensual urge to the fleshly life tends rather to become "inverted", distorted, and disguised than exhausted or dissipated. Beneath the professed disdain and indifference to wordly and fleshly pleasures there ever lurks in the religious philosophy of European Christianity a feeling, even an avowal, of deprivation, of a wrong to be righted, in which the wish-world of Heaven functions as an agency in the proximate future for the liquidation of debts and credits, a time of reckoning that must be hastened if possible by bringing the kingdom of Heaven down upon earth. And together with this implicit acknowledgment of deprivation there comes, as a consequence, a feeling of resentment against all those who are or who profess themselves, free from the feeling of deprivation or indifferent to the agonies of those who suffer from self-deprivation.¹ Finally it leads to a determination to impose their discipline and their values, at any rate to extort an acknowledgement of their own merit upon all others, for the "salvation of their souls". They must make a communal and universal necessity of their own virtue.

"The opposition is not so much," as Eliot points out, "between Indian thought and the New Testament, for both of them teach that bliss is attainable but not by satisfying desire." (Although, we may observe, even the New Testament is not free from that element of inversion to which I referred.) "The fundamental contrast is rather between both India and the New Testament on the one hand and on the other the rooted conviction of European races, however much Christian orthodoxy may disguise their expression of it, that this world is all-important. This conviction finds expression not only in the avowed pursuit of pleasure and ambition but in such sayings as that the best religion is the one which does most good and such ideals as self-realization or the full development of one's nature and powers. Though monasteries and monks still exist, the great majority of Europeans instinctively disbelieve in asceticism, the contemplative life and contempt of the world."²

It is, however, by the introduction of the Christian Doctrine of Sin that the great contrast between the social influence of Eastern and Christian asceticism lies; for the idea of sin, which

¹ Cf. Luke vi, 24-6: "Woe unto you that are full . . . woe unto you that laugh now . . . etc."

² Eliot, *op. cit.*, i, p. ix.

devaluates the sensuous world and makes participation in it "immoral", is used as a cultural weapon of oppression, which stamps the worldly life with the stigma of disapproval and wickedness, drives it out of sight and distorts it without in any way eradicating it. The Hindu ascetic renounces the world because it is painful and he does not desire it, he can therefore in no way be envious of those who try and delude themselves into finding it pleasant; the European puritan denounces the world because it is "wicked", and, if he may not enjoy it, he is at least determined that no one else will.

St. Francis of Assisi was perhaps, as M. Georges Batault would have us believe in his careful and illuminating monograph on this picturesque saint, the only Christian and the only European throughout Christendom who succeeded in renouncing the world of the flesh as the Hindu ascetic renounces it, without rancour, without envy, but with the sublime if tragic heroism of a knight errant waging an incessant war without respite, self-pity or pride against himself and his own most tenacious instincts. Cruel and pitiless towards himself, towards others he harboured but a tender sympathy and a gentle tolerance for their human frailties and worldly vanities. The most exacting search into the life and work of Saint Francis of Assisi will fail to reveal, according to Batault, the slightest hint of any social or even of directly moral preoccupations tempering his mystical adventures. This lover of Poverty and selfless adorer of the God he served was not in the usual sense of the word a social reformer or revolutionary. He was inflamed by no desire to redress the injustices of his age and transform existing institutions. The only revolution he sought and fought for was within not without the soul of man.¹ In this spectacle of a religious phenomenon, perhaps unique in the history of Europe, we are given a picture in which the psychological diagnostician may read masochism without the sinister taint of sadism to balance it. But the Puritan of Europe as we know him is above all a reformer and a social revolutionary, hostile and revengeful towards all views of life opposed to his own. Strong passions are never eradicated, and their apparent transformation is but an inversion. The zeal of the Puritan who seeks to make his virtue a rule for all, seeks to make the

¹ "Saint François d'Assise," in *Mercur de France*, 1st October, 1926, esp. p. 44.

deprivations of others compensate his own deprivations. The theoretical love he professes for all is too often expressed in the savage hatred of his behaviour towards all whose actions in any way symbolize the world he claims to have renounced. Too often the self-inflicted sufferings of the saint are proportionate to the cruelties he seeks to inflict on others. "Qui veut faire l'ange fait la bête."¹ When the Puritan rises to positions of power his codes are stamped with cruel and savage intolerance. We are reminded by Gibbon that "the laws of Constantine against rapes were dictated with very little indulgence for the most amiable weaknesses of human nature; since the description of that crime was applied not only to the brutal violence which compelled, but even to the gentle seduction which might persuade an unmarried woman, under the age of twenty-five, to leave the house of her parents." The punishment of the successful ravisher was death either by being burned alive or torn in pieces by wild beasts in the amphitheatre. If the virgin attempted to save her lover by declaring that she consented to the abduction, she was condemned to share his fate. The duty of a public prosecution was entrusted to the young woman's parents and if they sought to dissemble the inquiry and to repair the honour of their family by a subsequent marriage, they were themselves punished by exile and confiscation. Slaves convicted of having been accessory to the seduction were burnt alive, or put to death "by the ingenious torture of pouring down their throat a quantity of melted lead".² With a similar spirit of savage persecution the English Puritans when they rose to power punished by Act of Parliament in 1650 "fornication", by which they defined any sexual intercourse outside marriage, by three months imprisonment for both the man and the woman, while a "bawd" was placed in the pillory, branded on the forehead with the letter B, and detained in prison or a House of Correction for three years, a second conviction rendering the culprit liable for the death penalty. By a second Act even "condoning" fornication was a crime punishable by six months' imprisonment for the first offence, while anyone convicted a second time for the same offence, that is the offence of expressing an opinion unfavourable to their savage brutality, could be sentenced to banishment, and

¹ Pascal, *Les Pensées*.

² Gibbon, loc. cit., chap. xiv.

failing the culprit's appearance at the port of embarkation, to death.¹

This same passionate determination to be "free to worship God" by bringing the kingdom of Heaven down on earth drove the Puritan emigrants of the third decade of the seventeenth century to found the New England Colonies. This same temper in the Massachusetts colony drove them to give testimony to their "inflexible love of liberty and faith in man" by ruling in 1631 "that no man shall be admitted to the freedom of this body politic, but such as are members of some of the churches within the limits of the same": this same passion animated their inflexible determination that all within the jurisdiction of their power should bow the knee to the values and laws of *their* "kingdom of Heaven" and inspired one of their number, John Eliot, famous as the first Protestant missionary to the heathen, to start an active proselytizing mission to the Indians, which has at last almost led to the extinction of that race.²

In the widespread secessionism and sectarianism of our times, which has undermined the authority and coercive powers of the institutionalized Christian Churches, we are very apt to misread greater religious toleration for what in truth, is only loss of power. While the very indifference to theological and doctrinal questions and the personal licence that becomes possible under such a state of affairs encourages the ordinary layman to believe in all good faith, and without troubling himself sufficiently about it to connect the progress of social evolution with the ruling values of organized religions, that he is a faithful member of whatever sect or version of the Faith he happens to be born in. With the "dull and obstinate understanding of Gallus, he embraces, with implicit zeal, the doctrines of Christianity, which never influence his conduct, or moderate his passions."³ But with the savage pagan, subjected to the civil rule of a European power and relatively helpless against the proselytizing onslaughts of organized missions to the heathen, the matter is very different; for whether he is constrained to follow the "long and narrow path" of the convert or whether he remains faithful to the voice of his fathers and the tribal dieties, his whole social and individual way of life is revolutionized

¹ Scobell, p. 121, quoted by A. M. Ludovici, *A Defence of Aristocracy*, pp. 201-4.

² See Williston Walker, *History of the Congregational Churches in the United States*.

³ Gibbon, loc. cit., chap. xxiii.

and changed. In this respect the influence of the Puritanic cultures of Europe differ so much from the pagan civilization of Rome.

The general principle of government under the wise and paternal colonial administration of Trajan and the Antonines allowed and encouraged their subjects to enjoy the religion of their ancestors. The Roman magistrates well understood the practical and social value of native cults, consequently "they encouraged the public festivals which humanize the manners of the people. They managed the arts of divination, as convenient instruments of policy; and they respected as the firmest bond of society, the useful persuasion that, either in this or a future life, the crime of perjury is most assuredly punished by the avenging gods. But whilst they acknowledged the general advantages of religion, they were convinced that the various modes of worship contributed alike to the same salutary purposes; and that, in every country, the form of superstition, which had received the sanction of time and experience, was the best adapted to the climate and to its inhabitants.¹

We have seen how important and pivotal a place the attitude towards sex occupies in giving religions, ethics, and culture their distinctive stamp. If I have been in danger of labouring the point, the almost suspiciously conspicuous neglect it usually receives must be the excuse. The veneration and sacredness which surrounds the subject of human procreation and fertility among pagan races is sufficiently familiar, it may therefore be sufficient to note how fundamentally revolutionary the influence of a sex-phobic and sex-vilifying regime must be. We have seen that the conflict between Pagan and Christian culture trends represent diametrically opposed values and attitudes towards life, an inversion not only of values and of motives but of "reality". What the Christian convert now receives with furtive shame and degradation from Satan his evil principle, he and his pagan father formerly received from Priapus, his good principle. His pagan gods have become his Christian devils.

With the reformatory zeal of the early Christians in daily expectation of the second coming of an avenging Messiah, the native convert and the native teacher created and appointed by Christian missionaries wage a more unrelenting war against

¹ Gibbon, *loc. cit.*, chap. ii.

all true elements of native life than even the European missionary himself. Mr. Hedley, remarking on the severity of the native teacher towards the gentle and submissive Funafuti Islanders, writes: "He (the native teacher) seemed as anxious to obliterate native manners, and to substitute the habits and customs of the European, as he understood them, as to preach the European creed . . . Children were scolded for indulging in the pretty native custom of wearing wreaths of flowers in their hair. In their progress towards civilization the natives have lost most of their old amusements. The elders often look back with regret to the merry old days of heathendom, when the village was not so dull. Foot racing, lance throwing, quarterstaff fencing, wrestling and dancing have died out under the Native Teacher's disapproval. Singing is still keenly enjoyed, but is only permitted under the supervision of the Native Teacher or Deacon, and in a subdued tone. Attention is directed rather to singing passages from the Scriptures, or the multiplication table set to verse than to the stirring native chants . . ." ¹

It is the same story all through the South Seas, and wherever and whenever the Puritan has planted his standard. Another illustrative and self-revelatory account comes from Henri Junod who quotes one of his native candidates for the ministry at the Swiss Romande Mission in Rikatla in Portuguese East Africa. "As regards children at play," Dan Malungane continued, "we see little boys building miniature villages in clay, modelling oxen and wagons. It is very nice, they imitate their fathers. There was no objection against that in former times, when children were going about almost naked. Now Christian children wear clothing. When they sit in the midst of wet clay, they return home with their clothes so dirty that their mother must spend half a day to clean them. She gets angry; she cries. Better for our children to abandon these games in the new circumstances.

"It is not so objectionable when girls play. They take *sala* shells (parts of the bark of a rounded hard fruit), use them as pots and cook in them roots or earth, without fire. They teach each other the art of cooking. It is a kind of apprenticeship.

"When they grow older, boys play *nsema*. In this game a disk made of woven grass is thrown by one party towards

¹ C. Hedley, *The Atoll of Funafuti* (Australian Museum Memoir III), p. 56.

the line of another party, and the boys belonging to that second party must pierce the disk with sharply pointed sticks while still rolling. If they succeed in destroying the disk, they have won the game. There is no sin in that. But we see boys put such an amount of passion into that game that when the bell rings to call them to school they do not heed it. Moreover they forget the oxen which they have to herd. On that account also the *nsema* must be condemned. The same boys play at fencing (*mpfenkisana*). They learn how to fight with sticks and how to ward off blows. As such fights are now prohibited, fencing has become useless. They also play at grasping each other and fighting till one of the wrestlers has thrown his mate on the ground. This was very useful in former times. It gave strength and courage to the boys; when a cow was restive and refused to be milked, they dared to enter the kraal, seize the animal by one horn and by the tail and make the cow powerless. But now we have ropes for the purpose, and this game has lost its utility.

"I come now to the *chitjendje*, the harp with a single string on which the grown-up boys accompany their songs. There are many kinds of such musical instruments. They generally consist of a rod bent like a bow, the string of which is well stretched, a calabash being used as a sounding box. Some have a powerful sound and are heard from far away. You may hear two boys, one in this village and the other two hundred and three hundred yards away, exciting each other, playing and singing on their *chitjendje* till late in the night. This is all right and very nice. But what are they singing all the time? They are boys who want to marry; they are in search of a girl . . . and they do not praise anything except her. Or they insult the one who did not accept their courtship. Their words are sometimes exceedingly bad. Yes! Such is our music, the music of the Ba-Ronga! We know too well what it aims at. The *chitjendje* is bad. It must be abandoned. The same thing applies to the *chiketchi* of the girls. It is a rattle which they toss about in singing. They think of their lovers and call them. Soon you will see them putting ornaments on their clothing trying to attract the attention of the boys in this way. All this is nothing but darkness. Such games are not fit for us now. . . . Young people also like to play hide-and-seek (*ntumbelano*) in the evening. Boys and girls assemble for that

game. What is the use of it ? One may be scratched by thorns in the bush as it is dark ; and, as sexes are mixed together, who may say what will happen ? For us Christians, the way is clear ; after sunset we go to evening prayer ; then we retire home and go to sleep. These evening games are good for the heathen. They are not the proper thing for us." ¹

Are we not now better able to explain the curious fact, remarked on by Bagehot, that "savages did not formerly waste away before the classical nations, as they do now before modern civilized nations" ? ²

The reasons for these different effects must reside in a difference in the nature of the influence exercised. The Puritanical benevolence and interference which has everywhere followed in the wake of, or preceded, commercial exploitation in the Pacific, is, of all interference, the least supportable to the barbarian. It has destroyed his tribal life, the prestige of his chiefs, his morality, his pleasures, his beliefs, his hopes, the cement of his society and the very meaning of his life. It has, with clumsy dogmatism meddled with his sex life, destroyed his tapu system, and freed him only from the old fears which made him loyal to his corporate group. It has left him with new fears and suspicions, and a helpless incapacity to control his own destiny, while it bids him mimic the culture-forms he can never make his own.

¹ Henri Junod, in the *International Review of Missions*, April, 1920.

² Quoted by Darwin, *Descent of Man*, p. 284.

XI

THE DISINTEGRATION OF TRIBAL CULTURE¹

I

Factors of Social Integration

WHEN the functional anthropologist comes to compare different cultures, and the social organizations and moral systems that characterize them, he must know of some objective standard by which to compare them other than that of mere similarity to his own. It is true that the ethnographer in the acquirement of his data need not be directly concerned with any question of comparison or generalization. Dr. Malinowski, in the meticulous piece of intensive work he produced on the Trobriand communities, defines the ethnographer's aim as being "to grasp the native's point of view, his relation to life, to realize *his* vision of *his* world. We have to study man, and we must study what concerns him most intimately—that is, the hold which life has on him."² Yet although he invites us to study a community so far only beginning to feel the influence of the strange white power, that influence is so real and far-reaching that it has begun already to modify, in a subtle way, the whole structure of their social organization, of the relation between clansmen and tribesmen to their chiefs, between the men and their women, and between tribes and their neighbours.

So soon as we realize that the power of European civilization is radically altering the institutions and the whole life of the islanders of the Pacific—and even the most superficial observer is forced to recognize this fact—it becomes our duty to investigate the nature of the change, the determining factors that produce the change, and the results and consequences of the change.

¹ This chapter is founded on an address delivered as President of the Section of Ethnology and Anthropology of the Australasian Association for the Advancement of Science, January, 1923. *Proceedings*, vol. xvi, pp. 497-517.

² *Argonauts of the Western Pacific*, p. 25.

If we require comparative and analytical results we may find it convenient to inquire, as a crucial test of the trend of development in a given community: "are there indications of decay or disintegration, or are there indications of growth or widening integration?"

Before proceeding with the task of defining the conception it may be as well to state its claims to usefulness. A comparative scientist, no matter what his subject may be, has to standardize, in accordance with some plan, the objects of his investigation. For this purpose he needs a standard or norm which may be equally well applied to every class and category of object within the scope of his subject. How else can he appraise them comparatively? I do not know that any one recognized standard of this sort has been generally adopted. The nearest comparable approach to standardizing the sociological "quality" of civilized communities is perhaps contained in M. Emile Durkheim's work on suicide. His work has some bearing on our inquiry. Without elaborating his arguments I may roughly indicate the direction of his conclusions.

After defining suicide as death resulting from an act of commission or omission accomplished by the victim himself with the intention of producing that result, he shows, by a close analysis of all available statistics, that every society at each moment of its history, has a definite "aptitude" for suicide, which is independent of, and very much more constant than, all other contributory determining factors such as sex, insanity, alcoholism, climate, season of the year, etc. By a process of elimination he shows that this specific suicidal tendency or aptitude which exists in every social group is explainable neither by the psycho-physical constitution of individuals nor by the nature of the physical environment, but is determined by social causes which in themselves constitute indices of collective social phenomena. For instance, his analysis of facts succeeds in showing that if Germans commit suicide more frequently than other people, or that the rate of suicide in all European countries is lower among Jews than any other religious category, or higher among Protestants in each country than among their Catholic co-nationals, the cause is not to be found in the blood that flows in their veins, or the thermic conditions of the countries they live in, or even in the nature of the sanctions or prohibitions of their religious beliefs, but *in the influence of the particular*

*variety of civilization in which they live and have been brought up.*¹

That is to say, although religion is shown to exercise a prophylactic influence on suicide, that influence is unconnected with any such specific belief as the belief in God, which Jews and Christians hold equally; or belief in the immortality of the soul, which plays a more important rôle in Christianity than in Judaism; or fears of future punishment which, if effective, should exercise more influence in the case of Christians than of Jews. For it is precisely in Judaism, whose adherents shows the smallest propensity for suicide, that suicide is not formally proscribed.

Durkheim succeeds in demonstrating that comparative graphs of the rate of suicide can be made to serve as a sociological index of the type or quality of a culture which is of very great value. The variations of this index relate not to such factors of secondary importance as details of custom, belief, dogma, or law, and complex questions such as race and insanity, nor merely to the fact of their existence, or to the fact of their being common to a definite social group; but to the strength and intensity by which they feed the collective life, by which means they give cohesion to the social group.

In the department of ethics, Professor Sorley recognized the importance of this scientifically observable factor of social cohesion when he wrote in his Gifford Lectures, "National life shows unity and purpose, not so much by wealth or power being possessed by the people or equally distributed amongst them, as by a community of interest such that the same values appeal to all."² This description of Sorley's defines in very general terms precisely what I mean by the use of the phrase "an integrated community".³

Anthropology, however, requires standards capable of more exact and definite measurement than is contained in general references to psychological categories.

Durkheim's method is an example of a valuable attempt to supply at any rate one measurable index of social integration. In place of being content to catalogue the different types of suicide in categories denoting the circumstances surrounding the commission of the act, he is concerned to classify the cause

¹ *Le Suicide*, p. 173.

² *Moral Values and the Idea of God*, p. 112.

³ Cf. also Nietzsche, "Kultur ist vor Allem Einheit des künstlerischen Stiles in allen Lebensäusserungen eines Volkes," *Unzeitgemässe Betrachtungen: Erstes Stück*, p. 183.

or social conditions determining their frequency. In short, his classification, "in place of being morphological, is from the start etiological."¹

Durkheim's analysis consequently resolves suicide into three main etiological categories, which he terms respectively—"egoistic suicide" (*le suicide égoïste*), of the man who, becoming detached from the ties of communal life, loses the incentive which make life seem still desirable; the "compulsion of altruistic suicide" (*le suicide altruiste obligatoire*), of the men whose amenability to the incentives supplied by society seems to compel them to quit life itself; and a third category, of those who suffer through their participation in the communal life when by reason of some abnormal general dislocation the communal life itself becomes disorganized: this third type he calls "*le suicide anémique*". Civil and economic crises influence this type. This classification gives meaning to such facts as are apparent in the conspicuous general higher suicide-rate of unmarried men over married, of childless men over fathers, and of childless wives over mothers.

The general principle that emerges from this analysis suggests that men tend to commit suicide when they become detached from society (a circumstance favoured by society itself being disintegrated), and, on the other hand, the tendency is also noticeable when the pressure of a highly integrated society becomes too strong. But the causal categories of the two types of suicide are different. In modern Europe the "egoistic" suicide predominates; in primitive communities it is correspondingly rare. The suicide most frequently met with among primitive people is of the "compulsory altruistic" order. Under this category come (1) the suicide of the warriors and men who immolate themselves to be spared the shame of dying of old age or illness; (2) the suicide of women at the death of their husbands (suttee); (3) the suicide of dependents or slaves on the death of their chiefs.

Thus the rate of suicide is an index, positive or negative, of social cohesion, whether the factors of cohesion reside in the religion, the family, the nation, or any other organized group. Suicide as an index of social cohesion is only one of many observable sets of facts, all of which might be used, such as the rates of divorce or crime, or indications of the progressive dissipation

¹ Op. cit., p. 141.

of social or religious cohesion afforded by reckoning the rate at which religions split up into dissentient sects, industrial and civil strife, etc.

No statistical method depending on elaborate and detailed records, which are seldom or never available in primitive communities, is suitable as a universal measure of social integration. Yet it is none the less important to discover other indices, even if they cannot be statistically treated. Our inquiry should aim at discovering in each given community what the factors of social integration are, and how they operate—in fact, what actually makes it a community; for then we shall also understand what is most important, characteristic, and essential in it.

The stability and social health of any group, whether it is a clan, a tribe or a nation, however high or low in the scale of culture and complexity, may be reckoned by the degree of integration or disintegration that it exhibits. Every weakening of the clan tie, every blow aimed at the authority of the clan or tribal chief, destroys the social purpose of each member of the clan or tribe. That alone in a true and literal sense demoralizes him. No vaguely understood universal religion can restore unity to a shattered tribal system.

It is not overstating its claims to say that the conception of integration and disintegration applied to communities is the most valuable that the sociologist may employ, for it is applicable to every form of organic life. Ultimately, life itself, is only identifiable in terms of unity and disintegration; growth, in terms of widening integration; decay, in terms of disintegration. "The quarrels and divisions about religion," said Bacon, "were evils unknown to the heathen. For, as in the natural body, a wound or solution of continuity is worse than a corrupt humour; so in the spiritual."

Among most barbaric peoples and savage tribes, the three principal and interrelated factors of social integration may be summarized under the following heads: (1) the chieftainship, (2) magic and sorcery with their roots in the mythological and religious traditions of the people, and (3) the system of exchange of gifts and barter of goods, partly economic and partly ceremonial and non-economic. Out of this trinity of functional social determinants is developed the system of primitive economics, primitive jurisprudence and primitive ethics, which for a proper understanding of the meaning of barbaric customs and ideas

of justice must be mastered by the European colonial administrator. My illustrations of these three factors of social and tribal integration will be drawn from Papuo-Melanesian and Micronesian communities.¹

In tribes where the chieftainship system is well developed, as among the Trobriand Islanders, and less so among the Papuo-Melanesians of the Cape Possession district, every department of native life is thoroughly tribalized. When the chief speaks, it is the voice of the clan or tribe which is heard. No member of the clan would think of questioning the word of the chief on any tribal matter ; neither would the chief act or speak publicly except in strict accordance with tribal tradition.

Tribal law and tribal morality is unwritten, and needs no police force or established church to enforce ; yet it is far more efficient and infinitely less often transgressed than European morality and laws are by Europeans. Neither does there exist any class of men within the community who are constantly questioning their morality and constantly seeking to upset their laws or make new ones. Yet almost every European who comes into contact with natives talks about moralizing them and giving them laws ; while the whole history of European contact with the natives of the Pacific, especially of recent British administration, has been the story of wilful destruction of native culture and morality in a vain endeavour to replace it with a culture and morality neither capable of being thoroughly absorbed nor of ever proving efficient.

Speaking of the Trobriand headman of high rank, Malinowski writes : " His rank inspires every one about him with the greatest and most genuine respect and awe, and the remnants of his power are still surprisingly large, even now when white authorities, very foolishly and with fatal results, do their utmost to undermine his prestige and influence." ²

In British Papua the system adopted to extend white man's morality and government " law and order " consists in appointing in every village, as soon as it comes within the area under control, a native to represent the white authority. This individual is given 10s. a year, a rough worsted smock uniform, a badge,

¹ In what follows I rely principally upon my own observations, supplemented by references to Dr. Malinowski's *Argonauts of the Western Pacific*, and Dr. Seligman's *Melanesians of British New Guinea*.

² *Argonauts of the Pacific*, p. 63.

and title of "Village Constable". The Village Constable is then supposed to wield supreme authority in his village community, which in all probability may consist of several clan units each with its own hereditary chief. If carriers or any other service is required by the white authorities, it is through the Village Constable that their orders are conveyed. He is also given certain powers of arrest under the Native Ordinance. The natives soon become acquainted with the white man's power to enforce his will, and of the invincibility of the dreaded rifles with which his decisions can be enforced.

There is no very uniform method in which this new native power is set up by the Government. The appointment is made by the Resident Magistrate of the district (confirmed by headquarters), who selects whoever he considers the most suitable person. If the natives' own recognized biggest chief were always selected, thereby enhancing and consolidating his already sufficient power, less harm would be done. In practice this very seldom happens. Frequently the nominee of the nearest missionary is selected. Such a nominee would obviously be a person as emancipated as possible from native traditions and native ideas. The claims of a native who could speak English—probably a sophisticated rogue who acquired his English on a plantation or a mission station—are likely to be considered.

One Government regulation in particular has the effect of ensuring that the real chief whose authority and prestige is respected by the natives will seldom be chosen, and that instead some upstart will be set up to oppose his power. No native may remain a Village Constable who marries more than one wife. There appears to be no reason for this rule except the missionary teaching that polygamy is wicked. The result of this rule is most unfortunate. In general and with few exceptions the prestige and economic position of a chief is dependent upon plurality of wives. In the Trobriands, where chieftainship is highly developed, the position of a chief economically depends upon the number of his wives and the traditional obligations in a mother-right community which causes a man to contribute as a matter of course to the maintenance of his sister's husband. It is owing to his superior economic position ensured in this way that a chief is enabled to reward and direct the communal labour essential in all tribal enterprises. Thus in the Trobriands, at any rate, the success

of the missionary policy of abolishing polygamy would result not only in the virtual disappearance of chieftainship, but also of all tribal and communal enterprise, and the dislocation of all the personal and functional relationships that bind together Trobriand society.

Among the natives of the Cape Possession district, where I had opportunities of studying the problem of native culture gradually being undermined by white influence, neither chieftainship nor polygamy are developed to the same extent. Even there, however, the clan chief and men of greatest importance would formerly have given evidence of this by the possession of two or more wives.

As I have already shown, against this important native custom missionaries, supported by the Government, wage a relentless war.¹ The result is not only to undermine the prestige of the chiefs, but to disrupt the integration of the family, as is evidenced by the growing increase in adultery (or theft of wives) and the loosening of all clan ties. Even from the point of view of the white Government, the fact of prohibiting their native representative, the village constable, from conforming to the social and economic traditions of his own people, in the midst of whom he is living, and thereby giving him a special and exceptional temptation to break the law of which he is supposed to enforce the observance, is the surest means of demoralizing him and of bringing the white man's law, for whose enforcement he was created, into contempt. Thus the natives gradually become accustomed to the idea that laws (unlike their tribal taboos, observed unquestioningly and seldom violated except in error) are rules and codes arbitrarily imposed by a foreign power from which the cleverest and most cunning men obtain relief by transgressing them and avoiding them in as many ways as possible.

When we come to the question of primitive magic and sorcery we are dealing with one of the most important and yet least understood factors in native life. The idea that magic and

¹ See *ante*, chapter viii, § 4.

Sir Hubert Murray, Lieut.-Governor of Papua, in his book, *Papua of To-day*, p. 292, accuses me of "inaccuracy" in the statement that the Government supports the missionary war against polygamy and native marriage systems, though he admits to showing "disapproval" of polygamy by discharging polygamous "village constables". Beyond his assertion, Sir Hubert offers no evidence that my statements are incorrect.

sorcery can possibly perform a necessary social function seldom seems to occur to the white man who, equipped with a very imperfect and superficial knowledge of the origin, development, and evolution of European culture, and with a host of preconceived notions, sits down in the midst of a native community for the purpose of "protecting" it, giving it "good laws", or of "teaching it morality".

Magic and sorcery are intimately related to chieftainship, the power of the latter depending in a great measure upon the former. No attempt can be made here to discuss magic from the psychological or historical point of view. We must be prepared, however, to acknowledge that belief in magic and supernatural agencies is present in different forms in all cultures, and that so universal a trait of human nature may be, and has at different times been, put to all sorts of uses, social and anti-social, good, bad, and indifferent. It is an error, as Lecky observed, to suppose that humanity is growing less credulous—it is only the objects of its credulity which change.

Generally speaking, magic and sorcery are in primitive communities the coercive and inhibiting agencies that support the power of the chiefs, enforce the observance of tribal taboos, and maintain social and family relationships in accordance with traditional usage. This does not mean that magic supplies a coercive element for forcing men unwillingly into ways abhorrent to them. On the contrary, it supplies the necessary stimulus which naturally indolent humanity needs even to induce it to act with vigour, enthusiasm, and unanimity in the direction it thoroughly approves of.

When it is remembered that in communities that have no organized and paid police, no monetary inducements or financial prizes, and no prison system, the position and power of chiefs, the minute observance of codes and taboos and communal undertakings entailing arduous labour cheerfully and willingly borne, even when it taxes the limits of human endurance, are sustained eventually by the *ultima vires* of magic; and when we remember how much more efficiently and with less friction this factor operates than the forms relied on to preserve order in civilized communities, its positive social significance must surely be recognized.

The outline history, so far as I was able to discover it, of the Mekeo tribes of the St. Joseph River district, situated inland

of the eastern reaches of the Gulf of Papua, may help to illustrate the rôle and place of the sorcerer in many Papuan tribes.

Many generations ago two small and closely related tribes or tribal offshoots, the Piofa and the Vee, migrating from their original homes, travelled westward until they came to the left bank of the St. Joseph or Anga-bunga River, where they settled in close proximity near the present site of the village settlement of Oriropetana, some 10 miles inland and east of Cape Possession. Originally each of these tribes seems to have consisted of two intermarrying exogamic clans (*icupu*).¹

Each *icupu* (which has to-day branched out into several local clan groups, scattered over a considerable area of country) was similarly but independently organized under clan chiefs, whose office was and still is strictly hereditary. These chiefs in every clan consisted of the head chief (*lofia faa*) and the war chief (*io lofia*: lit. "chief of spears"). Each of these chiefs maintained a communal clan-house, where the fully fledged and initiated male members of the clan could foregather. In addition to the two chiefs, and without counting departmental magical experts who superintended the arts of hunting, agriculture, building, or war, there was in each clan a hereditary chief sorcerer, *faia lofia* more feared and as powerful as the chief. The rôle and main functions of the two clan chiefs are explained in their titles. The head chief represents the clan and takes the lead in all important ceremonies, distributes food at feasts, and presides over his clan-house. The war chief is the leader in battle. Of the functions of the sorcerer we must speak later.

Notwithstanding the independence of the many clan groups that have sprung up since the early settlement of the tribe, the prestige of many generations of chieftain's office is recognized

¹ Dr. Seligman, in his *Melanesians of New Guinea*, translates the word *pangua* in the Mekeo dialect as "clan", making *icupu* a further subdivision of the clan. This I believe to be an error which makes the clan organization appear unduly complicated, while a comparison with the neighbouring dialects disproves it. The clan in Motu is *iduhu*, in Roro it is *itsibu*, and in Mekeo *icupu*. The Mekeo clan organization will only be clear if this equivalence is accepted. The words for the locality of the clan-settlement (i.e. village) are respectively—in Motu, *hanua*; in Roro, *aiara*; and in Mekeo, *pangud*. That this is the true meaning of the word *pangua* is further indicated in its derivation. Father van Geothem, who knows the Mekeo dialect intimately, gave me the following derivation: *Angu angu* = to squat. *Angus* = to be squatting. *Oi lo angus* ? = lit. Are you squatting ? = i.e. Are you well ? (if sick you would be lying down). *Paangua* = Place it ! (lit. make it to sit down ! *pa* = a causative prefix). *Pangua avonga* = the settlement or village (lit. the place of the sitting) (*avonga* = a place).

all over the Mekeo country in the special veneration in which the present head chief of the original senior clan (*Ongino feka* : lit. "Rotten Grass") of the Piofa tribe is still held.

From time to time family groups would form themselves, under their own headmen, into subdivisions of the clan, and eventually, when they felt they had grown big and strong enough, would break away from the parent clan, and, migrating to new territory, form a new local clan group organized like the parent clan. Some six or seven generations ago such a group detached themselves from the Onginofeka clan group of Oriropetana and formed a new clan settlement a few miles away on the right bank of the Anga-bunga, where they became the Ongofoina *icupu* (meaning "Under the breadfruit-tree"), but retaining the same totemic plant¹ (*angoi* : a breadfruit-tree) as the parent clan. Other clan elements have since settled in the same place, and the compound village settlement (*pangua*) is now known as Veipa. The original chiefs of the senior clan (Ongofoina) were three brothers, one of whom became *lo pia faa*, another *io lo pia*, and the third *faia lo pia* chief sorcerer. Ever since, the descendants in strict hereditary male descent of these three brothers have been respectively head chief, war chief, and chief sorcerer.

Sorcerers look upon their calling as an honourable and necessary profession which they are qualified to practise by hereditary right and by careful training, apprenticeship, and study. The lay population regard sorcerers in much the same light, and readily accord them the prestige due to their high calling, provided they do not use their art and their power to meddle in the domestic affairs of their own clan. In the event of such a breach of professional decorum they are sometimes driven out of the local clan settlement. For it must be remembered that sorcerers are never supposed to practise their black magic against members of their own clan. It is always the sorcerers of other clans and villages—especially, of course, hostile villages—who are dreaded and suspected of doing people harm. From their own sorcerers they expect protection from hostile sorcerers in other villages.

¹ The totem plant or animal in Mekeo is called *iauaifangai*; associated with it each clan group has a number of copyright clan emblems called *hanga-hanga* or *da-da* in the Roro dialect.

In the Roro-speaking villages of Waima I made the acquaintance of Tata-Koa, renowned for his magic throughout the Roro and Mekeo districts. He was among the most intelligent and amiable of my informants. Some twenty years previously a most serious epidemic of sickness had broken out in the Waima villages, and so incensed were the natives at Tata-Koa's negligence or inability to stay the epidemic, or to neutralize the evil magic of hostile sorcerers which must have caused it, that they drove him out. So he migrated to the distant village of Mou, where he remained for some ten years, finally returning to his native Waima and founding a local clan hamlet of his own. It was at Mou that Dr. Seligman met him during his visit to the Roro district. Dr. Seligman quotes from Captain Barton, then a Resident Magistrate of the Central Administrative Division of Papua, who, in accordance with the white Government's native policy, had arrested Tata-Koa on a charge of sorcery. In answer to this charge Tata-Koa replied to this effect: "If a man falls sick, his family come to me and ask me to make him well. If I don't do something for him they say, 'Tata-Koa the sorcerer desires to kill our brother,' and they are angry, and will perhaps try to kill me. If I do give them something they insist on paying me well for it; should I refuse to take their presents they would not understand it, and would think I was trying to kill their friend: but when I do take what they give me you arrest me on charge of sorcery and blackmail."

The social function of the sorcerer is, therefore, to preserve inviolate the power of the chief (who may or may not be a sorcerer himself), to suppress any anarchical or disorderly tendency, to give the community a sense of security in the face of known and unknown danger, to effect cures, to combat epidemics, to inflict injuries on the enemies of the clan, to counter the evil magic of the sorcerers of hostile tribes, to punish those who have offended the chief or the communal susceptibilities of the clan, and, in short, to hold the pulse of the tribe and sustain all those subtle influences that go to form the social cement that marks the difference between a community and a horde of men.

How, then, does the white man in authority, faced with this deepest and most far-reaching element, the native belief in and the use of magic, approach the problem? Does he assiduously study it from every aspect, trace its ramifications,

analyse its course and effects, or, at any rate, employ ethnographers to do so? On the contrary, he assumes he knows all about it without investigation, because he "knows what's right and what's wrong". So he immediately draws up some laws about it "in order to protect the native from himself".

The whole question is thus briefly summed up and disposed of in the "Native Ordinance":—

"Sorcery is only deceit, but the lies of the sorcerer frighten many people, and cause great trouble, therefore the sorcerer must be punished.

"Any native who—(1) practises or pretends to practise sorcery; or (2) threatens any person with sorcery; or (3) procures any other person to do so; or (4) is found in possession of implements or "charms" used in sorcery; or (5) accepts presents in the shape of food or otherwise when the obvious intention of making such presents is to propitiate a sorcerer, shall on conviction be liable to imprisonment for any period not exceeding . . ." etc.

Thus is the missionary given by law the monopoly and sole right to practise what from the native's point of view is only an alien and competitive magic—a magic which has for its object not the preservation but the loosening of all clan bonds. Neither is the comparison merely captious. The missionary professes in many ways to work precisely the same class of wonders as the native sorcerer. He blesses the armies and the Government of the white people in his churches; he effects cures by enjoining faith, just as the native sorcerer does by reciting magical formulæ; he forgives sins and grants indulgences; he tells the natives of the miracles worked by priests and saints in the old days; he blesses the crops and invokes supernatural aid to stay plagues and epidemics; and, also like the native sorcerer, he receives and even asks for offerings.

The official British attitude towards native sorcerers can be likened to both the official and the popular attitude towards witches in Europe up to the 17th and 18th centuries. The cult of European witchcraft, the Dianic cult as Miss Murray calls it, can be traced back to pre-Christian times and was a survival of the ancient pagan religion of Western Europe. It was a highly organized cult, with specific beliefs, ritual and festivals, whose organization survived, underlying the official Christianity, in spite of the efforts of the newer religion to stamp it out.

Since it was opposed by Christianity, the latter chose to recognize in its deity their Devil or Satan, and the witch cult accepted the title. "As every non-Christian God was, in the eyes of the Christian, the opponent of the Christian God, the witches were considered to worship the Enemy of Salvation, in other words the Devil." ¹

Dr. Malinowski, in his study of the Trobriands, lays stress on the social function of sorcery: "There can be no doubt that acts of sorcery are really carried out by those who believe themselves to possess the black powers. It is equally certain that the nervous strain of knowing one's life to be threatened by a *bwaga'u* is very great, and probably it is much worse when a man knows that behind the sorcerer stands the might of the chief, and this apprehension certainly contributes powerfully towards the success of black magic. On the other hand, a chief, if attacked, would have a good guard to protect him, and the most powerful wizards to back him up, and also the authority to deal directly with anyone suspected of plotting against him. Thus, sorcery, which is one of the means of carrying on the established order, is in its turn strengthened by it." ²

2

Primitive Economics and Primitive Ownership

One of the most profitably studied aspects of primitive society is the economic relationship and the system of exchange. So soon as the word "communism" is introduced into any discussion, whether of politics or ethnography, a host of preconceptions, false analogies, and wildly speculative ideas are introduced, and serve to obscure all rational and scientific analysis. Let us say at the outset that the imaginary primitive communism of political theorists has no existence except in their own minds.

Yet there are many reasons which make it convenient to retain the word as a term relating to definite types of social

¹ Margaret Alice Murray, *The Witch-Cult in Western Europe*, p. 9.

² *Argonauts of the Pacific*, pp. 75-6.

The same author observes elsewhere: "There is hardly anything more pernicious in the many European ways of interference with savage peoples than the bitter animosity with which Missionary, Planter, and Official alike pursue the sorcerer. *Crime and Custom in Savage Society*, p. 98.

organization and to definite psychological categories, eschewing the popularly expounded conception of the word in the sense of an equal and indiscriminate use of all valuables by the whole community. This idea relates only to a figment of the imagination. It must be our endeavour to seek to free the word from the illusions and vague absurdities that have clustered around it. Properly defined, and used with precision, the word should describe a reality in the growth of social organization, a reality demonstrably related to the laws of psychological functioning. In this sense "communism" may describe the organized use of all the resources of the community in personnel, labour, and material in furtherance of the purpose of the social unit as a corporate entity, or in order to facilitate by combination the gratification of those instincts and impulses with which each member of the community is endowed. Communism in this sense relates to the organization and direction of the labour of the community, and the distribution of awards, and the sharing (not the *equal* sharing) of privileges and enjoyments. In this sense there is no question of whether communism exists in primitive or in advanced communities, but of the form in which it exists and in what degree. Individualism as opposed to communism should indicate the tendency to appropriate and develop the resources of the community in labour and material by the initiative of individuals for their personal use and gratification. Inevitably both forces are present in varying degrees in all communities, primitive or otherwise, and must tend to balance each other. Neither should there be any question in the scientific mind as to which element is "theoretically" "right" or "desirable", since the scientific consideration is which element predominates in a given community, or how far either element could predominate under certain given conditions of social evolution and cultural development.

One of the most noticeable things about the undertakings of primitive tribesmen is the comparative absence of the sense of individual apart from corporate advantage. Communal labour is undertaken at the bidding of headmen or chiefs without any idea of an exact or equivalent return in the form of pay or reward. This is not the result of any highly sophisticated and conscious idea of social duty: it results solely in the inability of the individual tribesman to separate his identity or his personal profit from that of his tribe. Communism in this sense, as also

individualism, is the result of sentiments that are rooted in and developed from primary instincts. The capacity for communism or individualism lies in unconscious psychological processes. Consequently the whole of an individual's outlook on life is affected by the same psychological processes that condition the savage's capacity for communistic undertakings. They affect the savage's religion, morality, and his sexual relations; and it is this same characteristic which is responsible for the extreme power exercised by the chiefs in many of the tribes of New Guinea, South Africa, and all over the world where white men have not succeeded in killing the tribal system by teaching the natives individualism. As Dudley Kidd rightly points out the tribesman is communistic but not democratic.

When a European is attempting to convert a primitive tribesman to his idea of morality or justice he has first to overcome the native's innately communistic outlook and teach him individualism; this he does by instituting a system of individual reward for individual effort in the economic sphere, and individual responsibility and punishment in the legal and ethical spheres.

But this idea of individual responsibility is foreign to the native's outlook. Dealing with the primitive socialism of the Bantu races, Mr. Dudley Kidd remarks: "In theory, the entire property of all the members of the tribe belongs to the chief. Since even the bodies of all the members of the tribe belong to the chief, any damage done to the person of the individual is regarded as a criminal offence, and restitution has to be made, not to the person injured, but to the other. Thus if A breaks B's leg, or knocks out his eye, he has to pay damages not to B, but to the chief. When a white magistrate reverses this procedure, the natives think he is doing the tribe an injury, for he is putting a premium on anti-social selfishness. The action of the white man is therefore regarded as an immoral one."¹

Yet it must not be forgotten that even in Bantu communities the foundations of the individualistic idea of personal property are present. "We find that in the matter of personal property the Kafirs show their excellent moderation. The people regard their cattle as their own property, for the chief has his oxen, and the people have theirs. We may perhaps say that the cattle form the money of the people; yet even the cattle are held at the discretion of the chief, who is entirely justified in

¹ *Kafir Socialism*, p. 1.

appropriating them should a man fail in performing his tribal duty."¹

In New Guinea, where the chieftainship system is generally less highly developed than among the Bantu races, the idea of communal ownership vested in the person of the clan chief usually dominates the economic and social organization. For instance, among the Mekeo tribes every man will cultivate his own bit of garden with the assistance of his wives, and each family will rear their own pigs, which they may barter or make a gift of to a girl's father when buying a wife; yet on the occasion of a clan feast ordered by the clan chief all the foodstuff will be brought to the chief, who alone will have the right of distributing it and allotting to every man his share: while a pig, whosever it is, is seldom killed except at the order of the chief. In all these instances we can see that, while the title of individual ownership is a closely guarded privilege of the elect of high rank, ownership is never divorced from social function, except in respect of objects such as personal ornaments, etc., which are not looked upon as of much communal significance.

This healthy association of ownership and function, so sadly absent from the commercial and mercenary structure of modern European society is, in most primitive societies, accompanied by the communal use of property nominally owned by headmen and chiefs. It is this feature of communal use that is a mark of "communism" in the sense in which I use the word.

Dr. Malinowski, as we would expect, gives us many instances of this essentially communistic outlook in his book on the Trobriand Islanders, although he expressly refuses to give it the name of "communism". Speaking of the fishing villages in the Trobriands, he writes: "These villages are organized into several fishing detachments, each with a headman. He is the owner of the canoe, he performs the fish magic, and, among other privileges, obtains the main yield of fish. But all his crew *de facto* have the right to use the canoe and share in the yield. Here we come across the fact that native ownership is not a simple institution, since it implies definite rights of a number of men, combined with the paramount right and title of one."²

The problem in which we are interested beyond the ethnographer's bare description of native labour and craft is the

¹ Ibid., p. 9.

² Malinowski, *Argonauts of the Western Pacific*, p. 112.

problem of human motive. Certain work can only be performed by the united efforts and co-operation of several men. Why do they work together? What sets the machinery in motion and keeps it going? In our own society the economist answers that every man, driven by the economic necessity of providing food and comfort for himself and his family, equates his energy with an appropriate equivalent or return in the purchasing-power of money. The social psychologist of to-day is very apt to challenge the economist's analysis of the organization of society, and to deny altogether the existence of his convenient frictional unit "the economic man".

In primitive society there is no money, no wages, no police, no slave-driver, yet the work is done—in most cases remarkably efficiently done. Very briefly, let us inquire how some fairly typical primitive community would set about any task requiring communal labour. I will choose my example from a community I had the opportunity of observing.

Aua Island is a small isolated coral island situated between the first and second degree of south latitude, north of New Guinea and at the western end of the Bismarck Archipelago group.¹ The social organization may be classified as matrilineal and matrilineal. The chieftainship is well developed. Besides local clan-hamlet-group chiefs, there exists a class of experts or craftsmen called *anu-anu*. The natives live principally by fishing and the cultivation of a species of swamp-taro. Certain members of the community are fishermen and "own" or are masters of, small single-seated, and big six-, eight-, or ten-seated canoes. At the beginning of a new season, when the south-east trades change to the south-west, and the canoes of the villages on the lee side of the island are overhauled, there will be many new ones to build. The building must be supervised by one of the craftsmen.

First of all, the owner will go to the chief and explain his needs, mentioning at the same time that in his family plantation there is a suitable breadfruit-tree. The chief gives his sanction, and the craftsman is next approached. This functionary, after pronouncing upon the suitability of the tree selected for the purpose, will appoint, in conjunction with the chief, a day for the felling. From this time until the completion of the work

¹ G. Pitt Rivers, "Aua Island," *Journal of the Royal Anthropological Institute*, vol. iv, pp. 425-39.

the owner will set his female relatives (his sisters and mother—not his wife, who does not belong to his family) to the task of preparing suitable cooked food offerings for the craftsman. The chief would, of course, not be forgotten. On the appointed day the chief would summon the necessary hands for the work, which takes place under the direction of the craftsman. Subsequently the work of preparing the dugout for the final stages is performed in the same way by the requisite communal labour. Certain complimentary distributions of food take place from time to time as the work proceeds; of this the craftsman naturally receives the lion's share. In no sense do the unskilled workmen receive anything representing the equivalent of their work. It is enough for them that the chief has spoken: the work must be done.

As the work proceeds the craftsman requires less auxiliary help and does more and more of the finishing himself, riveting and dovetailing the end-pieces, shaping and balancing the body, the outriggers, and the float, and finally finishing over the surface with pumicestone. Certain ceremonies will take place at the final launching, and a ceremonious distribution of food to those involved in the work.

Of those who took part in the work, one man only would actually own the canoe, and his own family group, and possibly the chief, would alone derive any direct benefit from its use. The majority of the workers lend their aid as an act of service to the chief, and the small quantity of food and betel-nut they might receive from the owner could not be regarded in any sense as an equivalent return for the work. In addition to the chief craftsman, under-craftsmen would help in the various tasks of making the end-pieces (*aluna*), the paddles, the lashing, the outriggers, etc. All this labour, the individual as well as the communal, while it provides an individual with the title of ownership, is none the less an expression of communal or social purpose. Neither is an undertaking of this sort in any way exceptional; it represents the rule in primitive communities, and in many that have advanced a long way along the road to complexity.

The ethnographer's observations on similar undertakings in the Trobriands have a very wide and general application. He writes: "This differentiation of tasks, co-ordinated to a general purpose, requires a well-developed social apparatus to back it up, and one that is permeated with economic elements.

There must be a chief, regarded as representative of a group; he must have certain formal rights and privileges, and a certain amount of authority, and also he must dispose of part of the wealth of the community. The chief's authority, his privileges, the customary give-and-take which exists between him and the community—all that is merely, so to speak, the mechanism through which the force of tradition acts. For there is no organized physical means by which those in authority could enforce their will in a case like this."¹

The Trobriands do not perhaps furnish us with the best possible example of a primitive communistic society; yet communistic elements are clearly discernible in characteristic settings. But, as has already been suggested, what is of far greater sociological significance is not the existing degree of what may fairly be called communism, but the degree of integration exhibited by a culture; and it is important that these two should not be confused. In primitive societies we find no analogy to the communism of political theorists, as Malinowski has been at pains to point out "the savage is neither an extreme 'collectivist' nor an intransigent 'individualist'—he is, like man in general, a mixture of both".² In his society he finds plenty of scope as we do in ours for gratifying the desire for display, the esteem for wealth and for the accumulation of food."³ In fact all societies are in Tawney's phrase "acquisitive societies".⁴

Social evolution may be viewed as a progressive growth in complexity and in the coalescence of smaller social units into larger ones in which the smaller ones remain component subdivisions—such as families into clans, and clans into tribes, tribes into nations, and nations into empires. Each step is an advance in the direction of wider integration, and in complexity and heterogeneity. But greater organization brings with it increasing specialization, and inevitably this process must foster the development of individualism. *Pro tanto* the difficulties of maintaining integration increase, and these can only be overcome by a corresponding increase in the efficiency of organization. When organization and efficiency fail to keep pace with this process of evolution, disintegration sets in and we witness the

¹ Malinowski, *Argonauts of the Western Pacific*, p. 158.

² *Idem*, *Crime and Custom in Savage Society*, p. 58.

³ *Ibid.*, p. 29.

⁴ Cf. R. H. Tawney, *The Acquisitive Society*.

decay of culture. This, broadly speaking, has been the history of the rise and fall of civilizations.

To understand the trend and course of this process we must search for the psychological forces underlying these changes. We find in all his thoughts and acts primitive man gratifies his desires with a degree of unanimous communism impossible in more evolved, individualized, and less homogeneous communities. The primary instincts that demand satisfaction do not change in the course of evolution, but the mode of gratification becomes more complex as the selective and discriminative processes of the mind build up sentiments around them. Complete satisfaction is less and less achieved in immediate and direct gratification, but becomes more and more dependent upon an assurance of renewed and continuously repeated satisfaction in the imagined future. For example, social cultures are characterized to a very great extent by the form in which they manifest the sexual and acquisitive instincts. The more primitive the society, the greater is the extent in which the objects of both instincts are used communally: that is to say, the further we regress towards the primitive the less individualistically organized are the modes of gratifying the sexual and the acquisitive instincts, and the individual exclusiveness with which women and property are held in our highly individualized European societies is, in savage societies, tempered by greater deference to the claims of the collective group.

Rivers' conception of primitive communism was probably influenced by the ideas of political theorists when he ascribed communism in women and goods and a gerontocratic government to the early dual system of Melanesia.¹ Communism in goods, he assumed, would inevitably follow a fully organized system of sexual communism, whereas all that may plausibly be inferred is that the gradual organization of society inevitably tends to limit the unrestricted and unsocialized free gratification of all natural impulses as they arise. In the earlier stages of society the social limitation of individual gratification would have to encounter fewer obstacles from man's elaborated capacity to secure for himself monopolies in the imagined future. The absent Australian *tippa-malku* husband appears to suffer no pain at the thought of his wife in the arms of one of her *pirrauru* husbands, though

¹ *Melanesian Society*, ii, p. 564.

the strict chastity of the wives they have left behind becomes an important consideration to savages in higher or more evolved communities. But if it were legitimate to imagine a human society as primitive as that of the anthropoid apes, the immediate sexual monopoly of the strongest male is, as Brehm shows in his study of ape communities, the only socially regulative factor.¹

Thus the individualization of the sexual instinct is correlative with the individualization of the acquisitive instinct. Communal ownership of property and the relative communization of wives gradually give way in process of social organization to an increasing exclusiveness in the use of women and property.

To this extent the communistic Perfectionists of Oneida were right when they taught, in the words of J. Noyes, their leader: "There is no intrinsic difference between the property in women and property in things; and that the same spirit which abolished exclusiveness in regard to money, would abolish, if circumstances allowed full scope to it, exclusiveness in regard to women and children. . . amateness and acquisitiveness are only different channels of one stream." Consequently, community of women was taught and practised as an indispensable feature of communism.

Women and property are intimately related, not only because upon the place they together occupy in the social organization depends its character, in a political sense, but because, psychologically, the discriminative growth of the acquisitive instinct gradually transforms the sentiments based upon the sexual instinct. This does not, of course, mean that communism in property connotes sexual promiscuity, although it does mean that the absence of a highly individualized self-consciousness

¹ A. E. Brehm, *Thierleben: allgemeine Kunde des Thierreichs* (1876), p. 48. " . . . Kein weibliches Glied der Bande darf sich einer albernen Liebenschaft mit irgend welchem Grünschnabel hingeben. Seine Augen sind scharf, und seine Zucht ist streng, er versteht in Liebessachen keinen Spass. Auch die Äffinnen, welche sich oder besser ihn vergessen sollten, werden gemauschelt und zerzaust dass ihnen der Umgang mit anderen Helden der Bande gewiss verleidet wird; der betreffende Affenjüngling, welcher die Harémgesetze des auf sein Recht stolzen Sultáns verletzt, kommt noch schlimmer weg. Die Eifersucht macht diesen furchtbar. Es ist auch thöricht von einer Äffin solche Eifer sucht heraufzubeschwören; denn der Leitaffe est Manns genug für sämtliche Äffinnen seiner Herde. Wird diese zu gross, dann sondert sich unter der Führung eines inzwischen stark genug gewordenen Mitbruders ein Theil vom Haupttrupp ab und beginnt nun für sich den Kampf und den Streit um die Oberherrschaft in der Leitung der Herde und in der Liebe. Kampf findet immer statt, wo mehrere nach gleichem Ziel streben; bei den Affen vergeht aber sicher kein Tag ohne Streit und Zank. Man braucht eine Herde nur kurze Zeit zu beobachten und wird gewiss bald den Streit in ihrer Mitte und seine wahre Ursache kennen lernen."

is reflected in the sexual orientation of the individual as well as in all departments of his social behaviour.

In all his activity the primitive savage merges his self-regarding sentiments in—or, rather, projects them on to—his social group, either his clan or his tribe. He feels himself an inseparable part of that group, and identifies his passions with those of the other members of the group. There is no sense of sacrificing himself for the good of the whole group. There is merely a spontaneous and unrationalized feeling of identity with the group; just as he regards any member of a social unit outside his own as identified with that outside group. If a member of that foreign group injures or kills a member of his group, he will help to kill some member (it is quite immaterial if it is the actual offender) of that foreign group. If a member of his own group violates a group taboo he must be killed—not because of any idea of punishment or retribution, but because every member of the whole group will individually suffer from the consequences of the violated taboo. We have an instance of this in the Biblical description of the violation of the taboo placed by Joshua upon the Babylonish treasures in the City of Jericho. The violation of the Israelitish tribal taboo by an individual brought condign punishment upon the whole tribe at the hands of its outraged Deity. So Achan, his sons, and his daughters were stoned to death, so that Jehovah might cease from punishing the whole tribe.

Life in our highly evolved and complex civilization is no longer the simple problem it was, and still is to the primitive nomad. The power that civilized man has slowly acquired, by the accumulated knowledge of generations, is also a power he may use to destroy himself.

The accumulations of science have meant the growth of man's power over nature; but who has guarded the application of that power? Science, the product of a few men's brains, has produced vast machinery. But what sort of man has the machinery produced? What sort of man is best adapted to turn a lever from right to left all day long in a factory? And, invoking this same law of Darwin's that gave us so much comfort a few years ago, what type of man is best fitted to survive in such environment? Do we suppose that the mechanical assimilation of a little book-learning, which we so proudly call our educational system, will alter the whole nature of man in a single generation?

What is the meaning of these incessant commotions ; this break-up of empires and nations : this overthrow of Governments : this bitter clash of races, classes, and creeds ; these civil wars, race riots, strike riots, famines, and massacres ?

If civilization is suffering from some ailment, what is its nature ? The name of the disease is a synonym of all disease and all decay—"disintegration." Cultures, nations, communities, and tribes are stable and socially healthy according to the degree of integration they exhibit. This is an objective standard that the functional anthropologist may apply equally to any race, any nation, and any primitive tribe.

XII

CULTURE-CLASH IN A MAORI VILLAGE¹

I

Some Observations on the Passing of the Maori Race and the Decay of Maori Culture

THE rapid changes that take place in the life of barbarians suddenly brought under the influence of European invaders are nowhere more strikingly illustrated than in the recent history of the Maori people of New Zealand.

An actual description of the life of a people at any period of time, without reference to their past, and without the ability to discriminate those vestiges of the past that have no survival value from those elements in the present that have no roots in the past, gives us no clue to the nature of the changes that have taken place. We are now witnessing an ethnic and cultural metamorphosis of the Maori population, in which each generation represents a distinct step in a new direction.

When Mr. Elsdon Best, the greatest living authority on the Maoris, agreed to accompany me on a visit to one of the little Maori hamlets that lie along the Wanganui River, I hoped that I might be privileged to observe, not exclusively with the eyes of a stranger and a twentieth century European, but that I might, with his assistance, gain something of perspective and peep back through borrowed spectacles into the intimacies of history that is past, and attempt to understand the view-point of a forgotten as well as of the present Maori generation.

The answers and conversation of three generations of villagers have been used to illustrate the psychological aspect of the problem of culture-clash. Each of the three living generations had their distinct and contrasted view-points as they attempted to account for the decay that had overtaken the race.

¹ This chapter in its original form appeared as an article entitled "A Visit to a Maori Village," in the *Journal of the Polynesian Society*, vol. xxxiii, March, 1924.

Within the restricted time limit of the enterprise, and the space limit in relating it, neither a complete nor even a wholly adequate picture can be presented. Certain features only can be selected, such for instance as the present influence of the Maori concepts of *mana* and *tapu*; ¹ and in so far as these are typical and represent the mental background of the people, the picture conveyed will be a true one.

Starting from the town of Wanganui, a nine hours' journey up the river brought us to our destination, a collection of little tin-roofed, match-boarded houses grouped round the Church and the meeting-house.

About a quarter of a mile away from the Church, surrounded by a low fence, stood a solitary small house differing from the rest by the possession of a projecting veranda and brightly painted doors and windows.

It was obviously the house of someone of importance. As it transpired, it was the house of the man who was to be our host, the Chairman of the District Council, a body which, like the Village Committee (Komiti Marae), had been brought into being by the *Pakeha* ² for the better control and administration of the Maori body politic.

The steamer had dropped us and the mail-bag at the same time. I first met our host, who had come to collect his letters, when the village postman handed them to him as he sorted them out.

It was hard to imagine that the khaki-shirted man, who quietly pocketed the many typewritten envelopes, was the son of a tattooed old native who had never been able to speak a word of English.

He knew Mr. Best, who had visited the village the year before, and we were invited to stay in his house, where we received the most generous hospitality.

We were not formally introduced to the village until the evening, when a special meeting of the villagers was convened for the purpose.

Meanwhile, tea was prepared for us by an old lady, who was a relative of our host; and as we waited, a girl was sent to fetch a gramophone, which was set to work on a jazz record.

¹ For an illuminating general account of the relation of *mana* to *tapu* and of their functions cf. R. R. Marett, *The Threshold of Religion*.

² i.e. European.

The room we were in might easily have been mistaken for a kitchen-room in an English labourer's or artisan's cottage. On a dresser by the door a row of a dozen or so books. I recollect the titles of three in incongruous juxtaposition : one of Ballatyne's Books for Boys, a copy of the New Zealand Hansard, and the Book of Mormon. It appeared that as well as the Church of England and the Seventh-Day Adventists, the " Church of Jesus Christ of Latter-Day Saints " were in active competition for the souls of the villagers.

Anxious to know how much the younger generation knew about their own history I asked one of T——'s nephews, a schoolboy of about thirteen, what he learned at school. He had learned about the Wars of the Roses, and was now learning about the 100 years War, but he had never been told about the fighting along the Wanganui River during the Maori Wars that had taken place sixty years ago ; neither had he heard of the famous tradition of the Pa ¹ of Operiki, whose overgrown ramparts still stand on the terrace above the river.

In all its long history never had the old Pa of Operiki been taken by an enemy. Many generations ago the Waikato tribes had had to retire in confusion from the impregnable *Pa*. The very old men still remember the song of derision sung by the Pamoana warriors as they climbed the top of the earth-works to jeer at the retreating enemy.²

The younger generation are guarded from all knowledge of their pagan past. They know little or nothing of the pride, ambitions, hopes, and outlook of men who lived in another world incompatible with the present one. There came a time, after the disastrous and depressing catastrophe of the Maori War, when the rising generation refused to look back into the past, refused to learn the names of the long line of ancestors which their fathers, now the very old men, take a pride in

¹ *Pa*, fortified village.

² The song starts :—

*Te rongo mai hoia hos
Ko te waro hunanga kai tenei
Ko te waro hunanga tangata tenei
Ko nga tuatara o Kawakawa !
Kei nganga kau ou turi
I te hapainga i te hakaui ote hos*

*A, hia riro atu to toha i Matai
E tu ake nei te whakawahi
O te riri.*

Have you not heard that this is the chasm
Where food and men are lost ?
These are the terrifying tuatara of Kawakawa,
Lest your knees be wearied to no purpose
In wielding the canoe paddle
When the rock of Matai (*a big boulder in the
river below the pa*) is carried away
Standing there as a symbol of war.
Then, but not before can you take this pa.

remembering, back in many instances, to thirty-four generations ago.¹ There was too great a bitterness in the memory of what had once been their greatest pride, and there may also have been a feeling (perhaps not altogether conscious) that they *dare* not know too much about the past, it might prove too great a handicap in their struggle to adjust themselves to the present. After them came a new generation, a larger proportion had white blood in their veins, the Maori wars had been forgotten, and the past of two or three generations ago seemed mythical in its remoteness and its unreality. Now and then it would stimulate the curiosity of a young man, and he would turn for information to a European like Mr. Elsdon Best, who had preserved this knowledge for him. This fact was gracefully acknowledged by the Maori vernacular paper "Te Toa Takitini" (dated 1st October, 1922). In it the writer admits that: "although a Pakeha, Te Peehi (Elsdon Best) is the survivor of the bygone Maori elders (Kaumatua Maori e ora nei), because his knowledge of old-time lore, even going back to the islands from which our ancestors came, is superior to the present Maori generation."

Race consciousness is still very strong in the full-blooded Maori, and it is strong in the mixed blood, but in each new generation there are fewer to pride themselves on their pure-blood ancestry.

To all outward appearances there was nothing in the life of a present-day Maori village to suggest that the influence of the old war-like pagan life had not been completely obliterated, yet there is a very distinct contrast in the outlook and adjustment of the three contemporary generations that compose the present Maori population, and I will now attempt to illustrate the difference as far as possible in the words of each.

The older generation, the majority of whom could not speak English, were purely retrospective in their outlook; for them the Maori world had come to an end. The middle generation, of which our host might count as an example, gave expression to a more hopeful feeling. It was a feeling rather of determination to face the future at all costs and to blot out completely the painful memory of the past with its failure and

¹ Tamarau gave Mr. Best the genealogy of his own clan (*Ngati-Koura*) back thirty-four generations, involving between 1,400 and 1,500 names, with many explanations of occurrences.

disappointment, than of unquestioning confidence in the future or of mere indifference to the proud records of their once unchallenged race. It is a realization that they can only stand up to the European by acquiring his knowledge. It was expressed thus: "We have now finished with the past, there is no going back, we accepted Christianity because our old gods failed us. Henceforth we must copy the European and acquire his learning and knowledge. When I was a lad, my father wished to tell me about the old times and the old customs, but I would not listen to it; they are of no more use to the Maori; the only thing left is to follow the white man, instead of learning the names of our ancestors and learning their customs. It is too late to go back now. Afterwards, when I was grown up, I went to the Pakeha school and learned to speak English with the children. The only thing left is to learn to make things like the Pakeha. Yet how many of the young men who go to college become wasters, they come back to the village with so much knowledge that they do no work and loaf about like superior beings."

When Europeans criticize the present-day Maori for having acquired all the vices of civilization they should remember that it is our proselytizing culture that has arbitrarily sought to stamp out all the meaning, and therefore all the virtues, of the past. Thus Colenso writes in 1878: "It must be born in mind that the present generation of Maoris is a widely different one from their forefathers—inheriting nearly all their vices (with those heavier and commoner ones, too surely attendant on "civilization") and but little of their virtues. It is further illustrative to observe that by far the largest number of their proverbs are in support of industry, and against slander, gluttony, and laziness—their present three common vices."¹

Now let the rising generation express itself, in the pride of its new outlook and stilted English, in the following letter of a Maori schoolboy of seventeen to his uncle.

"My dear Uncle,

"Prompted by my tender affection I am taking advantage of this opportunity of writing you a few lines before I return to Wellington, as in all human probability I am unlikely to see you again for some unknown period, unless, of course, something unforeseen happens.

¹ W. Colenso, *Trans. of New Zealand Inst.*, vol. xxii (1878), p. 112.

"I have a suggestion to make and that is, if you like, I'll put you through the Native Interpreter's Examination. I'll send you some papers in connection with it, viz. "Copy of Deeds," etc., which is essential in the above examination, and I am sure if you work at it in accordance with instructions which I will forward with the papers you will easily pass, for I know instances where men of minor education, or even inferior to yours, have qualified for this examination. This is an opinion which I would venture to explain to you more distinctly had I the opportunity of seeing you personally.

"I am enclosing a snapshot of myself as a souvenir. It is one taken with my little camera.

"I haven't any more to say to you, and so I'll bid you, with a French farewell, "Au revoir," which means "Adieu until we meet again".

Your affectionate nephew,

A—— B——."

Truly "follow the Pakeha" is the watchword and ruling thought of the present generation!

The older men look with a wider perspective. It is no longer the outlook of men facing the unknown, they have already seen changes taking place, and have formed an idea of the direction in which the trend of events is moving. There is more of disillusion than faith in the power and value of the white man's promises.

The following is a close translation of the old Maori's speech of welcome to us at the evening meeting. The general tenor and refrain of his speech was often repeated to us by other of the older men whom we questioned.

"Once numerous, now diminishing and dispirited, our women no longer bear many children, and our villages are emptying. White men brought us wonderful things—white bread which looked good, but when eaten swelled and blew out our stomachs, and we were sick—he also brought us diseases, which killed many of us. He brought us Christianity, and we accepted it—but he broke our *tapu*—and our *mana* left us.

"When our *mana* was destroyed the whole world became dark, and if this work of yours will bring light (referring to anthropological investigations) it will do good, and we will gladly assist you and welcome it. In the past we expected much

but were more often disappointed. In the old days the Pakeha brought his knives and tomahawks and bought our lands with them, but we did not know the value of what he brought." ¹

The present infertility of the Maori women is often referred to in the villages. It is worth noting that the Maoris frequently maintained that their women were more fertile if mated to Europeans than to their own stock. In his *Lore of the Whare-Kohanga* Mr. Best writes: "A noticeable feature of the modern life of the Maori is the ever increasing lack of fertility among the young women of the race. This is not so noticeable by the casual observer, on account of the custom which obtains among childless married women, of adopting one or more of those of her relatives whose quivers are better stocked. But when engaged in the task of making out the genealogies of all living members of the Tuhoe tribe, I was enabled to note the great numbers of couples, many of them young people, to whom no children have been born. The birth-rate of the Tuhoe tribe is very low, and the cause of this decadence probably lies in the changes wrought in social conditions, etc., by the advent and settlement of Europeans in this land."

The constant allusion still made by the older men to the destruction of their *tapu* system by Europeans needs some explanation, because of the great importance of the idea and its associated beliefs even at this late stage.

In a private communication Mr. Best writes as follows: "The coming of missionaries and other Europeans to New Zealand led to the breakdown of the institution of *tapu*, and the weakening of the influence of the chiefs. The missionaries strove to abolish *tapu*, and did so to a great extent. They destroyed it as a corrective force, as a highly useful element in the life of the people. Apparently no missionary ever studied or understood this remarkable institution, and so they knew not the harm they were doing. In the end we saw the Maori, like a rudderless ship, drifting passively, aimlessly, hopelessly, down the stream of life."

"The methods employed by missionaries to wreck the system

¹ The payment for the land made over to Colonel Wakefield on behalf of the New Zealand Company in 1839, by Maori chiefs of the North Island, was at the rate of "about sixpence per thousand acres—made partly in scissiors, combs, beads, sealing-wax, and Jews' harps, and the first result of it was to set all the lucky chiefs fighting over a division of the goods." A. W. Jose, *History of Australasia*, p. 275.

of *tapu* were not always gentle. I have in mind the aggressive action of a famed missionary who, in his desire to stamp out 'superstition', tramped back and forth over a *tapu* area of ground near a native settlement. That *tapu* was *tapu tupapaku*, i.e. connected with the dead. The *mauri ora* is the spiritual side of the physical life principle, the most important of all human attributes. It is intensely *tapu* because it is a kind of immaterial shrine or abiding place of the protective power of the gods. Should this highly protective quality be vitiated, polluted, as by some infringement of *tapu*, then the gods withdraw their protective powers, and the person becomes utterly defenceless against the teeming dangers that surround him. He is helpless, his physical, intellectual and spiritual welfare is no more. When the *mauri ora* of man becomes *noa* (i.e. common, 'tapuleless,' virtueless) he cannot, according to the Maori, flourish under these conditions."

These ideas are worth studying and taking seriously, because they do actually symbolize a psychological and a physical truth, the truth that the old Maori stock is not capable of being adapted to incompatible culture-forms; it is in consequence gradually being extinguished and replaced by stock with a white blood infiltration.

A very old Maori summed up the matter in native terms (of which I supply the explanation) thus: "The *mana* (i.e., supernatural power, prestige, influence) of my people comes from Hawaiki, and when my people came from Hawaiki in their canoes they brought the *mana* and the favour of the gods. The *mana* lasted until the Pakeha arrived bringing their hot-water." (In the vernacular *wai wera*; the idea being that the European used the same pot to cook his food in and heat the water to wash his head, the most *tapu* part of the body. Cooked food was the most powerful agency of pollution—so in a lesser degree were the female organs—consequently cooked food was frequently used to break a *tapu*. The *tapu* of an man's head must be kept inviolate, otherwise he would become virtueless, common, or unclean. The Pakeha proved they were "tapuleless" by the nature of their daily ablutions. The Maori's subjection by a "tapuleless" foreigner made him also "tapuleless" or *noa*, common. In the early days when the Maoris were constrained to accept Christianity, they frequently went through a ceremony of destroying their *tapu* by warming water in a cooking pot

and pouring it over their heads. Old settlers back in the thirties have described how they saw Maoris undergoing this ordeal with every outward manifestation of abject terror.)

"Since the coming of the Pakeha's hot-water," continued the old man, "the Maori people have known no prosperity and only disease. On account of our *tapu* becoming violated the *mana* of the Maori people was destroyed. In the old days man was *tapu*, God was *tapu*, and his resting place (*moinga*) was *tapu*. Now none of these things are *tapu*, and man is defenceless against all evils and diseases, that is the only reason. The only thing that troubled the Maori before the Pakeha arrived was the black magic." (*Makutu*, i.e. the anti-social force as opposed to the good magic of *mana*.)

When I asked the old man why then his people had accepted this new Christian God whose followers had destroyed the *mana* of his people, he replied: "In the old days our gods (*atua*) listened to all appeals we made to them, however trivial, which the Pakeha God does not do, for he only listens to big things, but by the imported hot-water which we used we lost the favour of our gods, who became angry, so we had nothing left, and had to turn to the Christian God of the Pakeha."

The young men knew nothing of the Old Maori religion and lore, and it was curious to see some of them crowd round Mr. Best, a foreigner belonging to a different people, to ply him with questions about their own race and traditions. One young Maori, who had served in the European War, was listening to Mr. Best discussing with one of the older Maoris the old Maori conception of Io (the esoteric Maori idea of the Supreme Being). The young man hereupon interrupted with the remark that "after all, the old-time Maori faith was like Christianity in that both religions worshipped only one God." This comment showed clearly that he knew only the European teaching, since in the old Maori cult, Io, the supreme being, was esoteric knowledge known only to the higher order of the priesthood and men of high rank (*tohunga*). The highest gods known to laymen and commoners were the departmental gods: Rongo, for agriculture; Tangaroa, for fish; Tawhirimatea, wind, etc. The name of Io was extremely *tapu*, and could only be mentioned in the *tapu* school of learning (*whare wananga*). The second-grade priests would not direct their ritual to anything higher than the departmental gods; under the departmental gods

were the two grades of tribal gods and ancestral spirits to whom ritual could be directed by the lower orders.

With the destruction of the Maori *tapu* system, and the consequent extinction of the Maori *mana*, the Maori chieftainship necessarily decayed. The *mana* of the chiefs was automatically involved in the destruction. Few Europeans appear to understand how profoundly this has influenced the whole social and individual outlook of the Maoris, or how intimately this fact is connected with the depression and despondency which the Maoris will reveal to a sympathetic observer, but which is more usually attributed by Europeans to the Maori's incurable laziness—the last vice of which he was formerly guilty.

The social organization was peculiarly strong and efficient in the old days, because rulership, privilege, function, and responsibility were so closely bound together. A chief was a greater slave to duty than the slave. The chief's sense of stewardship is well illustrated by an incident related by a Land's Court Official: An old chief in one of the Northern Tribes in the North Island negotiated a sale of some of his tribal land. A sum of money was handed to the chief who, after much pondering, divided up the money, keeping nothing for himself.

Do the people regret the departed glories of their chiefs? The following discussion which took place between an old blind Maori of 75, a middle-aged man, a middle-aged woman, and a young man, may suggest the answer. All contributed to the discussion which took place in Maori, and all were unanimous.

I had asked through Mr. Best how it is that in the old days the people worked hard and cheerfully for their chiefs, while now people have to have village committees. The old man answered: "Since the Pakeha destroyed the *mana* Maori nothing remains except the Pakeha law and authority (*mana*), and the Village Committees are a part of the Pakeha *mana*, whence they derive their authority, that is why the people do not work so hard or so quickly as the Maori people did under their own *mana*, yet even now there is still just a little Maori *mana* left. (The Committee is not recognized as Maori *mana* since it is a foreign institution.) For instance, a purely Maori matter is still discussed in much the old way, but the Committee takes no part in that; its members may take part as Maoris, but not as Committee-men. For instance, lately we have been meeting to discuss the welfare (*ora*) of the Maori and those

matters that your friend (indicating me) is inquiring about. With the Pakeha things are different, money is the real god of the Pakeha. In the old days women hoped to have industrious and hard workers as husbands, and tried to be married to them. If a husband proved idle and did not work she often left him, but nowadays the women only think of the money, and only care so long as their husbands have money and property."

By undermining the Maori chieftainship the communal spirit became destroyed at the same time; for, the functional communism of primitive sociology is invariably aristocratic, in so far as its organization is at all developed. The democratic tendency inherent in the ethics, politics, and economics of modern European Christendom is intensely individualistic. All emphasis is placed upon the "good" and the supreme "value" of the individual; collectively their "good" must be measured quantitatively, each individual "good" being of equal value. But in the more primitive sociology of communistic aristocracy the "individual good" becomes merged in and identified with the "good" of the social unit, the clan or tribe, which is brought to a focus in, and articulated by, the chiefs. In terms of Jung's psychology the modern democrat of the European culture "introjects" upon himself the collective good of the State, while the old-time Maori tribesman "projected" his "good" upon the clan or tribe. Consequently, while the former tendency now operates as a socially disintegrating one, the latter tended towards social integration.

The matter could be illustrated by describing the mechanism of any communal enterprise undertaken in pre-European times, as related by the old men. When, for instance, the need arose for building a *whare puni*, or a *whare whakairo*,¹ the matter would be proposed by an *ariki* (always an eldest son of the family of high rank, pedigree and primogeniture being all important to the Maori) and then discussed. If the enterprise was decided upon, and the labour involved more men than the hamlet could produce, the help of neighbouring hamlets might be required to co-operate. They would never think of inviting the neighbouring clan-hamlets, these would always proffer their assistance without invitation, when they heard of the scheme. The men of the local clan-hamlet would assemble (the women would take no part, and the site would be *tapu* to them), and

¹ Sleeping house, or a superior house adorned with carved designs.

each stage of the operation would be discussed and decided by the people in consultation. Tasks would be allotted to various groups: one party to get the three main supports of the ridge pole, another to fell and bring in the huge tree for the ridge pole, another the side-posts, another for reeds, thatch, battens, rafters, another to do the carving, and so on. During the work the greater part of the food was supplied by the local halmet, but the assisting visitors would probably bring a little food which they would contribute to the common pool. When the house is completed a big feast takes place. At this feast not only all who took part would be present, but also neighbouring clan-hamlets would be invited. The invitation would be conveyed by a special messenger (always a *rangatira*¹). The messenger as he approached the village to be invited would strip his clothes, and prancing into the village would start intoning a song of invitation.² The clans who had taken part in the building of that house would always retain some *mana* over the house. They would always refer to it as "their house".

Before the feast an opening ceremony had to take place. The main object of the opening ceremony was to remove the *tapu* on the building so that the people could enter. This was accomplished when, in the course of the ceremony, while the *tohunga* (priest) was intoning his ritual, at a certain word a woman would cross the outer threshold, then advancing across the veranda of the *whare*, would at another word cross the inner threshold. By this means the *tapu* was removed and anyone could enter, since the female element being *noa* (common or "tapuleless") destroyed the *tapu*.

2

The Significance of the Decay of Maori Art

Among those who aver that cultural capacity is unrelated to ethnic distinctions, and that the fruits and evidences of cultural development may sufficiently be accounted for by the diffusion of cultural elements during the process of a socio-historical evolution, the development of art will be similarly

¹ Person of rank.

² For the words of the song, see *Trans. N.Z. Inst.*, vol. xxxv, p. 108.

explained. On the other hand, those of us who find this type of explanation inadequate, must show that the explanation of diffusion and a mechanical development cannot sufficiently account for the high excellence of artistic achievement at certain periods among certain races, only to be followed by the loss of that capacity when the race becomes absorbed or obliterated. For instance, how are we to account for the art of the Aurignacian and Magdalenian epoch, which is known to have been the work of one race, the art-loving Crô-Magnon, or how explain why with the extinction of that race its art too should have disappeared completely? ¹ In accounting for the gradual elaboration and development of an art culture, an artistic instinct or inheritable ability must be taken into account as well as the technique of a handicraft, which may easily be passed from one race to another. It is, of course, true that the social environment, its organization, and its values, in whatever way they may be derived, colour and invest with their own *Zeitgeist* the art of a people; the expression and execution of these values, however, is limited and determined by the culture-potential or capacity inherent in the ethnic composition of the people, no less than by their acquired technique. Races and cultures are relatively so seldom segregated for a long period of time that it is rarely possible to trace an art to its autochthonous origin, although there may be examples, as in the Crô-Magnon culture, where "the art of engraving and drawing was almost certainly autochthonous, because we trace it from its most rudimentary beginnings".¹ Somewhat more frequently, however, we find examples of a people like the Maoris, who, arriving in a new region with an already highly elaborated and complex culture of mixed origin, proceed to develop it along specialized lines during a long period of segregation, thus making it peculiarly their own. So we have to discover which elements of their art are peculiarly endemic to the people, and which may be traced back to some common root-origin by which they may be related to the arts of other regions such as those of Polynesia and Melanesia. According to Mr. A. Hamilton, whose authority may be trusted, "Maori traditions ascribe to Rauru, son of Toi, who lived in the Bay of Plenty, about twenty-six generations ago, the invention of the present pattern or style of Maori carving.

¹ Cf. H. F. Osborn's review of Crô-Magnon art in *Men of the Old Stone Age*, chaps. iv and v.

No other branch of the Polynesian art uses exactly the same designs, so that tradition is supported in claiming an endemic origin for the art of New Zealand."¹ Similarly, Mr. H. D. Skinner, who has made a scientific study of the evolution of Maori art, maintains that it is in its most characteristic forms native to New Zealand, though some of the motifs are derived from Melanesia. Particularly valuable is his work in tracing the evolution in design and form of characteristic Maori weapons, as, for instance, the evolution of the *mere* out of the adze head.² He has shown too that evolution of form, shape, and design is often profoundly affected by the material worked upon, whether it be wood or greenstone, etc.

A good deal, at any rate, of the recent criticism of the evolutionary theory of art, represented by such works as A. C. Haddon's *Evolution in Art* and H. Balfour's *The Evolution of Decorative Art*, is beside the point. For instance, A. C. Goldenweiser in his *Early Civilization*³ devotes some space to disproving the idea that so elaborated and specialized an art as that of the Maori, the Marquesas, or the Haida, can be looked upon as a stepping stone to something later, and less "primitive", such as modern European art. This may well be admitted, it may even, if required, be conceded that the Maori art is or was more specialized, and in some—perhaps many—respects may claim to have reached as perfected a standard as modern European art, provided, indeed, that anything sufficiently typical exists which can be looked upon as representing modern European art. At the same time we must remember that all art histories have had an evolutionary history in the course of which a certain general standard of perfection and excellence has gradually been reached, often followed by a period of degradation, or a disappearance. It should also be remembered that so mixed and heterogenous are most modern European communities that almost every ethnic type which has contributed to their racial history is represented in varying and continually altering proportions in their population, while cultural and artistic capacity is correspondingly uneven, the mean level and standard falling far below the capacity of a small minority. Comparisons drawn between the culture level of European

¹ Op. cit., p. 7.

² "Evolution in Maori Art" (*Journ. R. Anthropol. Inst.*, 1916).

³ Op. cit., chap. ix.

nations and more homogenous peoples are necessarily precarious, difficult, and seldom of much value.

The specialization of Maori art makes it a peculiarly reverberant index of Maori culture, and it is no less individual because some of its motifs show traces of having been derived from a common Indo-Oceanic source. This may be said, for instance, of the frequently recurring device representing the conventionalized human figure with the two supporting bird-headed *manai*; a similar design is met with in Melanesia and in India. Vishnu is sometimes depicted flanked by two bird-like figures. It is very probable, too, that the characteristic scroll patterns—the *pitau* spiral—derives its origin from Melanesia; other scroll patterns showing a close affinity, are found in both Melanesian and in Maori carving. If this surmise is correct the *pitau* is not originally a phyllo-morph representing the circinate fern frond, but a zoomorph derived from the frigate bird; its Melanesian derivation having become lost, it subsequently was thought to represent the curling shoot of the tree-fern.¹

Many other less speculative examples from Melanesian art could be adduced illustrating the gradual metamorphosis of designs by accidental or conscious variation. This particular class of examples shows that the chief motive has been to embellish a house, weapon, or other object with carving in the most pleasing and decorative way possible, and that in such instances, the symbolical significance of the device may be so relatively unimportant that it may frequently be changed or may disappear altogether. On the other hand, there exists both in Melanesian and Maori art patterns, devices, and carved representations in which the symbolical meaning and significance is supremely important. Even where the symbolical meaning of a pattern or device may have become obscure its association with an individual or a social unit would often serve to endue it with tribal "value". "Each tribe has its own rendering of a conventional type in the ornamentation of an article . . . departure from traditional lines was an *aitua* or evil omen to the carver."²

In this way art becomes highly charged with the socio-religious values of the community. It not only expresses the culture of the people, but indicates its condition; and by its

¹ Professor Haddon in an early work expressly rejects the theory of a Melanesian origin for the Maori scroll; more recent students of Maori art, however, accept it.

² Hamilton's *Maori Art*.

coherence and consistency, by the direction of its evolution, whether towards greater perfection or towards decay, and by the importance with which it is regarded, it reveals the tendency towards integration or disintegration of the people it reflects.

This thought was in my mind as I looked at the newly carved barge boards or gables that had just been nailed in place on the renovated tin-roofed *whare* at Koriniti. The old barge boards and the carved figure of the "ancestor" lay discarded in a heap on one side. In that contrast between the hesitating and poorly carved lines on the thin ill-fitted sawn planks of the new gables, the garish European paints, the modern untraditional introduction of a realistically painted bird, the patent evidences of the economy of labour, skill, and taste, which characterized the renovated *whare* and on the other hand, the better workmanship, the bolder design, the more solid material and the evidences of a surer hand and eye, on the much better carved old barge boards that had been discarded lay the whole story of a decaying culture. "Year after year the devouring tooth of time" has obliterated carvings and works of skill that can never be replaced—not only on account of lack of practised skill in the present representatives of the race, but on account of differences of environment caused by the tide of colonization."¹

Need we express surprise at this decay? If we ask: How, or why, does art arise? Or when we seek for the origin and motive of art in the more primitive communities, we observe that by his attempt to beautify an object, to lavish skill, thought, and care upon it, man thereby indicates that he values it. Similarly when man depicts anything he does so because the thing depicted has special significance or meaning for him. When he lavishes his best decorative art on his canoe, on the images he makes of his gods or of his ancestors, on his houses—especially his sacred or communal houses—on the tattoo designs of his chiefs or his women, or in his depiction of the wild game he loves to hunt, or the beasts he most dreads and wishes to avoid, he relates, in all these examples, the significance which these objects have for him and the place they occupy in his life. As his art evolves in elaboration he makes it also a medium for the symbolization of qualities, virtues, and abstract ideas, which are ascribed to certain objects or associated with them. Thus we see that the meaning or value of all objects implicated in

¹ Ex. Hamilton's *Maori Art*.

man's daily life, and his desire to give expression to that value, is the motive force which produces art. Art is in this way closely related to religion and sociology, of which it is a reflex.

The destruction of the meaning and of the values that supply the motive force in art involves necessarily the destruction of the impulse that leads to artistic expression. The meaning and values symbolized in Maori art have been destroyed, hence it is inevitable that the art itself should also have suffered correspondingly destruction.

XIII

THE WHITE MAN'S TASK

Some Observations and Conclusions on the Problems of Administration and Proselytism

IN the course of this study I have surveyed some of the most urgent problems that the administrator in our dependencies is bound to face and deal with, and have suggested some of the ways in which scientific anthropology can help towards an understanding of these problems, without which any solution of them is impossible. I have shown how problems of race and problems of culture are interdependent and mutually interact. I have shown that depopulation and alternatively overpopulation are problems which affect us actually, morally, and economically. I have also shown that depopulation is intimately connected with the disintegration of culture, which again is conditioned by contact with European culture. Arising out of this disintegration come the evils we speak of as native unrest. In the demographic data and the facts dealing with race mixture and its relation to sex-ratio variation, I have suggested methods by which we can gain a clearer insight into what is actually taking place in any given population, and have suggested how, both more and more adequate, data should be collected.

There has been a good deal of discussion lately in colonial administrative circles on the respective merits of the two policies which they call "direct" and "indirect rule" of native races. The "indirect" policy favours the provisional retention, so far as possible, of the forms and institutions of native traditional government. It favours the utilization of native chiefs in the subordinate posts of local government or the setting up of native local councils on a model adapted from European precedents, gradually increasing their power as they learn their lesson, and so making them the instrument of a very gradual process of transformation, which is designed eventually to raise them to the status of self-governing people—always

it appears on the model of what we, with our ballot-box traditions, call self-governing—under the British Raj. The direct method favours the appointment of European officials to administer justice and law in replacement of native bodies or individuals. What fundamental principle we may ask distinguishes the two policies? Do they differ in their final goal or do they both look, for example, to such an achievement as the setting up of that most Europeanized of African states—Liberia? Here we see the ripe fruit of European democracy and religion planted in alien soil.

When Liberia was established on the west coast of Africa as an independent republic, her citizens, the freed negroes from America, had for a century been trained in the ways of European culture and Christian belief; they were then fully equipped with all the culture-forms and culture-accessories of their white foster parents: with all paraphernalia of President, Senate, Officers of State, electoral system, Courts of Law, Church and moral code, and last, but not least, with large monetary subsidies. Culture-potential, however (inalienable from germ-plasm), the champions of democracy, liberty, and equality, were powerless to transfer. The result is what any biologist should have foretold—Liberia has developed along lines of her own, handicapped, it is true, by the tawdry trappings of a culture to which her people never had and never could have become adapted, and now, even Liberia's best friends have to admit, made ludicrous in its incongruous setting.¹

The story of Haiti and Sandomingo provides a similar example of the impossibility of infusing a foreign culture upon people who are not adapted to it. No environment can change the cultural capacity of a people, nor can a religion do so. The adoption of Christianity has never made a people more civilized nor more intelligent. De Gobineau, himself a fervent Christian, observed: "On ne m'indiquera pas, en compulsant tous les registres de l'histoire, une seule nation venue à la civilisation Européenne par suite de l'adoption du christianisme, pas une seule que le même grand fait ait portée à se civiliser d'elle-même lorsqu'elle ne l'était pas déjà . . . Le christianisme n'est pas civilisateur, et il a grand raison de ne pas l'être."²

Do advocates of indirect rule prefer, we ask, the expedient

¹ Cf. *The Black Republic*, by H. F. Reeve (1923).

² De Gobineau, *Sur l'inégalité des races humaines* (2nd ed.), p. 75.

of calling a white official Paramount Chief, a fiction that evoked the tolerant contempt of the Bantu, or the New Zealand procedure of instituting native village councils—*Komiti Marae*—to take the place of the old chiefs—bodies which the Maoris recognize as *Pakeha* creations, devoid of *Maori mana*, devices of the foreigner that cannot claim authority or prestige as native institutions? Or would they prefer to work through selected native chiefs, as did, for instance, the early missionaries in Tahiti and Rarotonga, where those chiefs that became converts or ministers of the new religion succeeded by these means in suppressing not only all their native rivals but all vestiges of native tradition, native law, and native justice?

In Rarotonga certain chiefs became ministers of the new religion for self-advancement and to be in a better position to seize their neighbours' land. Systematically and during a period of seventy-five years the Christianized chiefs lost no opportunity of depriving the people of all knowledge of their genealogy, their family history, their myths, traditions, and every element of Maori culture. These men administered the law and were deacons of the church. Colonel Gudgeon reports: "Just such men were Tamarua of Matavera and Judge Tupe, whose ferocious administration of the law, after a missionary training, nearly depopulated the district of Ngatangua."¹

The story of the tyranny, the massacres, and the destruction of the old chieftain's families, by Pomare,² the first "Christian King" of Tahiti, whose dynasty was created by the missionaries, is only too well known. We may recollect that in December, 1808, the Missionaries left the island in the company of their friend Pomare, himself driven out by a universal rising of the whole island under Opuhara, chief of Papora, caused by Pomare's massacres. After his escape to Morea (Eimeo in the old accounts), he devoted himself to the dual purpose of preparing for a war of reconquest and of converting his party to Christianity, for without Christian missionary aid he could never have hoped to succeed. "Under the appearance of religious services Pomare and the missionaries kept their forces under arms," writes Marau Arii Taimai, the missionaries helping to furnish their friends with muskets and cartridges. English interference, according to

¹ See the Administrator's (Colonel Gudgeon) report for the year ending 31st March, 1908. *Report*, No. A-3, p. 5.

² Pomare II, correctly known as Tunuieaite Atua, and usually referred to by the missionaries as Otoo, publicly confessed his Christianity in 1812.

Arii Taimai, alone prolonged the ambition of Tu (Pomare II) and caused the constant wars which gave no chance for the people to recover from their losses. The direct responsibility of the missionaries for the massacres and eventual victory of Pomare is confirmed by missionary evidence. Thus, in a letter to the Directors of the Missionary Society, they wrote on 14th January, 1800, "From the *Eliza* has been landed on Pomare's account (without any interference of ours) one eighteen pound carronade, two swivels, several muskets, and a great deal of ammunition" (Letter addressed to the Rev. John Love.) In the Missionary Diary we find the entry (*Voyage of the Duff*, p. 12): "Pomare sent us a note signifying that the Attahuruans are entirely subdued and destroyed . . . and requesting us to send him some paper to make cartridges, and two bottles of rum. A little of the former was sent, but the latter denied."

Arii Taimai, in her exceedingly valuable Memoirs, referring to the results of European control of the natives of the Pacific, observes feelingly, "Everywhere the Polynesian perished, and to him it mattered little whether he died of some new disease, or from some new weapon, like the musket, or from the misgovernment caused by foreign intervention. . . . For the diseases, perhaps, the foreigners were not wholly responsible, although their civilization certainly was; but for the political misery the foreigner was wholly to blame, and for the social and moral degradation he was the active cause."¹ There could in the end have been no other outcome but the eventual massacre of the Tahitian chiefs and spearmen under Opuhara, and the final and complete triumph of the new religion, established though it was by force and treachery.

Far from being ashamed of the treacherous and cowardly tool they used to effect their purpose the missionaries accepted him as the chosen instrument of God conveniently placed in their hands: "Thus," wrote the missionary chronicler of the

¹ *The Memoirs of Arii Taimai* (Mrs. Salmon), privately printed, 1st edition, 1893, and 2nd edition, 1901, Paris, p. 110. These Memoirs were set down by her daughter, Mme Marau Taaroe, last Queen of Tahiti, and arranged at her direction by Henry Adams. They contain much valuable and intimate detail, and form a reliable and authoritative account, based on otherwise inaccessible sources of native information, but are unfortunately hard to obtain, as few copies were printed. Consult also Williamson, *The Social and Political Systems of Central Polynesia*, vol. i, chap. v, and Moerenhout, *Voyages aux îles du Grand Océan*, part iii, chap. 3, pp. 425-69.

Ship Duff, " Pomare, on whom the favour of the English had drawn many enemies, and who at different times was so chased and straitened by them that, afraid of his life, he had frequently entreated his visitors to take him off the island, had now, at a very good time, extended his power far beyond all former example, and that without either courage or talents for war comparable to his enemies ; so that I cannot but ascribe it to the providence of the Almighty, who ordereth all things after the council of His own will, and for the accomplishment of His glory and gracious purpose. In whatever way these events are viewed, they certainly are much in favour of the mission : for it is clear, that those employed in it can proceed in their work with greater safety than when the natives were continually engaged in war." ¹

But if these examples of government by " civilized " natives are not encouraging, it does not entitle us to conclude that natives are incapable of efficiently maintaining order and justice among themselves. Their efficiency can only be shown in exercise of their own, not of *our* functions of government.

The teachings of functional anthropology can scarcely give encouragement either to what is called direct or to indirect rule.

How then will anthropology teach us the approach to a practical policy based on a sound knowledge and understanding of the problem ?

Contact being inevitable, the problem arises of how to make it least lethal. For us it is the problem of how to maintain the integrity of culture and the unity of the tribe. Some distinction must, of course, be made between natives already detribalized and outcast from their own culture, and those who still retain any essential principles of their culture. This leads us to the question, what are the ends of our policy ?

Are they not (1) to control the native territory politically, and make it safe against foreign aggression, (2) to maintain law and order. This does not mean to substitute our system of

¹ *A Missionary Voyage in the Shipp Duff*, p. 185.

An instructive commentary on missionary jurisdiction and transformation of native customs is provided by the missionary-inspired *Book of Laws of Queen Pomare*, of 1842 (*Buka Ture no te haapao raa o te hau o Pomare Vahine Tahiti*). The code includes laws on the prohibition of dancing, on marriage and sexual relations, on the prohibition of marriage with a deceased wife's sister, and a deceased husband's brother, on the penalties for Sabbath breaking, on the authority of the Bible and the penalties for making utterances contrary to the Bible.

law for the native system in order to regulate the organization of native life, but simply to protect the lives, the property, and the interests of our own white subjects living in native territory, (3) to stimulate native production and utilize native labour ?

For this purpose it is quite clear that we do not need to destroy native customs, even though they may appear unpalatable, that is if it can be shown that these customs are indispensable for the integrity of native culture. In the departments of magic and sorcery we have seen very clearly how indissolubly magic permeates and maintains the structure of primitive economics. Equally necessary is it in the preservation of chieftainship. Even headhunting¹ may be an indispensable element of culture. So also may be the institution of slavery, though here it may be remarked that slavery among Orientals and savages usually means something very different, more noble, and less degradingly intolerable than it meant in Europe and the U.S.A. Polygamy we have to respect under Islam and Brahmanism, yet we have wantonly destroyed the marriage system of many lower cultures in the Pacific, who, unlike Islam, were defenceless.

Here it may be asked, what should our attitude and our policy be in regard to Christian missions? It must be clearly stated that it is not primarily the business of the anthropologist to frame policies for the administrator. It is his business, however, to discover, and to show, what the consequences of any stated or tried policies will be or have been. The administrator must then make his choice.

It is, of course, clear that contact between savage and European culture is inevitable, but it is incorrect to speak of any of the actual consequences of contact as inevitable so long as any of the particular influences involved in the contact are not inevitable but are arbitrarily introduced. Religious proselytism, and introduced European systems of education or of government, are obviously not inevitable, but when introduced they produce definite and inevitable results.

We, who are members of what we believe to be a higher form of civilization, may find it hard to abandon the conceit that our own type of civilization must in all respects be better suited to our conquered subjects than their own. We are loth to acknowledge that we cannot "raise people to our own high cultural level" by changing their culture-forms. Yet facts

¹ As Dr. Rivers showed.

prove that culture-potential cannot be modified without first modifying blood, though that of course follows when races are in contact.

Of course, we can and do, give primitive people new culture-accessories ; new foods, clothing, knives, rifles, etc. ; and in so far as these do not furnish them with the means to destroy themselves, they make them more formidable, and usually more destructive.

Also we cannot impose new incompatible culture-forms without first destroying the ones we find. The diffusion of cultural elements between races in contact by borrowing is quite a different process, which involves the selection of some elements only, their modification or adaptation to the needs of the borrower and the complete rejection of incompatible elements. This is, naturally, a very slow and gradual process ; one far too slow and far too ineffective to suit the purpose of those who hope to mould human clay in the likeness of an arbitrary model of their own, instead of being content to watch a natural process of evolution, interfering, if at all, with the greatest caution, and then only in order to mitigate the evil consequences of too rapid a change.

The public at home probably does not appreciate how strongly the majority of field-ethnographers, sympathetically anxious to learn all about the customs and religion of the people and working in all parts of the world, have been driven, often against their inclinations, to the conclusion that Christian proselytism has done irretrievable harm to native races by disintegrating their culture, and to us also by the unrest and antagonism the process evokes. The harm is not confined to subject races under European tutelage. On what grounds of policy or ethics can we, who exclude Asiatics from Australia defend our one-sided penetration by Christian missionaries into China, forced on the unwilling Chinese chiefly by Clause XIII in the French Treaty of 1858-60, "on which other Powers based the less exacting clauses in their Treaties" ? Dr. Herbert Giles, our most eminent sinologist, shows convincingly that "the invasion by Protestant missionaries was not only widely resented, but that converts, so-called, were paid to declare themselves Christians and to join in the chapel services. These were popularly known as "Rice Christians" and had it not been for the clause in the Treaty giving them protection, the insulted people of China

would soon have made short work of them and of their pastors." ¹ On most occasions when there has been friction between Chinese and Europeans and Dr. Giles recalls particularly the "Tientsin Massacre" of 1870 and the Yangtze Valley riots of '91, "the diffusion of the Christian religion was the real grievance, there being no political issue." He also endorses the statement that "foreigners, as a body were themselves largely responsible for the disorderly conduct of the usually peaceable Chinamen. By their persistent and only too successful efforts to undermine the faith of the people in the sacred maxims of antiquity with which every Chinese child is inoculated in his first lessons, the missionaries have done their best to upset the firm basis upon which the respect for authority in their populous and lightly governed country rests." ²

On the other side it is pointed out that even if the truth of this indictment were admitted, true Christians would be compelled as a condition and fulfillment of their faith to push forward towards the evangelization of the world. Into this question the anthropologist cannot enter, here he must bow to the authority of the theologian. Though he might perhaps hazard the question whether it is worse to bear and suffer the pangs of conscience as the result of committing a religious sin against himself, than to be the wilful agent of social and individual suffering inflicted upon others.

Is it too late to hope that now by studying more sympathetically and intelligently native customs and ideas, we may learn their intrinsic value as expressions of social purpose? To the rising generation of our dark-skinned subjects have we the right to say more than this? May they learn to value whatever is sound or beautiful in their own culture, in which may be found the surest promise of their own racial achievement in place of blindly following the lead of people whose proffered cultural gifts they can never truly make their own.

¹ By article XIII of the Treaty between Great Britain and China, signed at Shanghai on 5th September, 1902, Great Britain agreed to join in a Commission to devise means for securing peace between converts and non-converts.

² Giles, "Christianity in China and Japan," in the *Sunday Times*, 18th, 25th October, and 8th November, 1925.

SUPPLEMENT ON SEX-RATIO

PREFATORY NOTE TO SUPPLEMENT

While the following Supplement discusses more generally and slightly amplifies some of the biological problems involved in the main thesis, the latter stands, or falls, independently of it. It is also, primarily, a plea for assistance and collaboration from specialist biologists and zoologists, who have not yet done much to help to solve the special problems incidental to the main general thesis, i.e. racial adaptability in relation to culture-contact and culture-conflict. The problem is stated from the approach of anthropology on the strength of what is regarded as valid correlations, it is for specialist biologists to supply a more adequate biological exposition.

The problem of sex-determination is mentioned in order to show that its solution is not necessary to the thesis.

The point may be raised that sufficient tests of the statistical significance of the figures in the Appendices have not been indicated. Since many of the totals are small and admittedly still inadequate, it was thought best to give in full as much data as possible. The best data would be derived from a synthesis of observations on small homogeneous communities at first hand by a large number of investigators. It seems unlikely that the right sort of evidence will be produced until the need for it is indicated and understood.

SUPPLEMENT ON SEX-RATIO

I

VARIATIONS IN SEX-RATIO AND THEORIES OF SEX

I HAVE shown in Chapters VII and VIII that the study of comparative demography reveals that masculinity, or the proportion of one sex to the other, varies considerably in different countries, among different races, and among different classes in the same country. Hitherto too little attention has been paid to these fluctuations, though analysis indicates they are directly related to the perpetuation or the gradual decline of a population.

If upon examination it is found, whenever a given population exhibits a progressive surplusage of adult men over adult women of reproductive age, that the progressive excess is concomitant with a corresponding decline in the crude population, and, inversely, that a stable or increasing population exhibits a tendency to produce a surplusage of mature women over men, we may legitimately assume that some correlation exists between the two sets of facts, and that the study of masculinity may help to elucidate population or racial tendencies. If these correlations can be successfully established, the fact of their concomitance does not thereby establish the causal connexion between them. It leaves undecided whether a deficit of females is sufficient of itself to procure a decline of population, or whether the sum of determining causes which produce a decline also necessarily bring about a disturbance in the balance of the sexes, or whether both mutually are interactionary cause and effect.

The attempt to establish conclusively the relation of progressive masculinity to crude decline of population is attended by many difficulties. Foremost is the lack of adequate vital statistics. The hypothesis here advanced refers to the masculinity of adults of reproductive age, and such statistics as are usually available relate either to the masculinity of the whole population or to the masculinity of the birth-rate. While there is but slight variation between the masculinity of births among different races and in different countries, variations

in the masculinity of adult populations are considerable. Therefore, as I have previously observed, the differential survival rate of the two sexes at different age categories is more important than the masculinity of births alone. Further investigation of the problem in civilized countries is complicated by disturbing factors such as immigration and emigration; so that countries like the United States of America, Australia, and Canada show an unduly high ratio of masculinity owing to the fact that a greater proportion of men migrate than women, while in Japan the proportion of women who migrate is relatively higher than in Western countries, so also is the rate of female suicide. On the other hand there are either inadequate statistics or none at all among those savage communities which contain a relatively homogenous and non-migratory population. It is, however, among the latter that the problem may best be studied.

Primarily our task is to establish correlations in an empirical way, secondarily it may not be profitless to formulate, provisionally, the theory of sexual distribution and survival which seems to explain our correlations.

We have, as yet, no final and satisfactory definition of sex—of maleness and femaleness, neither can we claim finally to have solved the problem of sex determination. Sex, we may have reason to believe, by being the means of variation of organic life, enables the organism to withstand changed environmental conditions. Physiologists suggest that in lowly organisms "conjugation may be a process by which the average character of the species is sustained, disadvantageous peculiarities of any individual Protozoon being counteracted by other characters in the unrelated neighbour with which it conjugates; or it may be a source of variation by bringing about new combinations among the essential substances of the two conjugates . . . When the conditions of life are untoward, conjugation is apt to occur, and it may be followed by new combinations of qualities, some of which are suited to the altered conditions of life. Conjugation promotes variations, and some of these pay by securing survival".¹

Since the organic life stream in the flow of its reproductive processes, even in its earliest and sexually undifferentiated stages, contain the source of both the sexual elements, we may figuratively view that stream as containing in a constant ratio

¹ Thomson and Geddes, *Sex*, p. 30

the dichotomous elements into which it tends to polarize. It is as though the undifferentiated stream at an early stage in its course is met by an obstacle that divides its waters into two diverging branches. Newcomb uses a somewhat similar figure in a paper on Sex-ratio variations.¹ A great number of different factors may actually determine which of the two branches of the stream each particle of water will flow down before it actually reaches the fork, but, if the two branches carry away an equal volume of water, the factors that determine which side of the stream each particle of water will flow before reaching the fork will not affect the proportion of water each branch will carry away after the fork has completely determined the division. Similarly there appears to be a tendency which differs slightly among species and among different races of mankind for the sex-ratio at birth to be constant and approximately equal. But the analogue of a stream dividing into two diverging branches, whose waters are distinct and apart, does not help us to provide a figure which could be applied to the view which insists upon the existence of bisexual elements in the sexual determined individual, in which the dominance of one set of sexual character is counter-balanced by the recessivity of the corresponding opposite set. We have also to face the fact that while the sex-ratio may exhibit a constant tendency at birth, that ratio owing to a differential survival rate differs from the sex-ratios at other stages of development either previous to, or at any stage subsequent to, birth. More particularly the sex-ratio at birth differs from the sex-ratio at the ages of maturity and reproduction, which are the ages at which the sex-ratio may be expected to exercise the greatest influence upon racial tendencies.

The masculinity of the birth-rate—which should also include the stillborn rate—shows slight variations among different races, populations, or distinct classes in the same population. Throughout the human race the number of male births only slightly exceeds the number of female births, the proportion varying slightly in different countries. In fact among all dioecious animals (i.e. all animals in which there are two kinds of sexual individuals) the two sexual individuals are generally produced in approximately equal numbers.² According to an

¹ Quoted later.

² Marshall, *The Physiology of Reproduction*, p. 624, and Darwin, *The Descent of Man*, part ii, chap. viii, pp. 331-4.

exhaustive statistical study of the sex-ratio by Nichols, it appears that among nearly seven million births in all parts of Europe the average ratio was 1,057 boys to every 1,000 girls born, and that in most countries in Europe the ratios range in the neighbourhood of the average. In most countries the masculinity among Jewish births is higher than among the non-Jewish population, though this last variation may be due partly to the lower rate of Jewish stillbirths.¹

The results obtained by other investigators correspond closely. Newcomb gives it as a "well-known general fact that in the entire Semitic races there is a slight preponderance of male over female births", and quotes Mulhall who finds the ratio to be 1,052 male to 1,000 female births, or expressed in terms of excess of male over female in 100 of both sexes combined, 2.6. If stillbirths were reckoned the rate would be higher owing to the greater number of male than female stillbirths. Including stillbirths the masculinity rate in France is given as 2.92, and Massachusetts as 3.3 (living 2.8). Available statistics for negroes in America show the male preponderance to be less than one-half the Semitic race. Japanese statistics appear to yield similar results.²

According to the statistics collected by Mr. Havelock Ellis of all European countries Russian Poland showed in 1884 the lowest excess of male over female births, the ratio being as 101 male to 100 female; Greece was notable as showing the highest, being 112 males to 100 females, which is the same ratio as in Ontario in 1908. Greece was the only European country where the males were in marked excess among the adult population.³ The same author also refers to the male birth-rate among Jews which is everywhere found to be higher than among Christians. In England the proportion of male births is said to be decreasing. It may be difficult to account for a difference found in most countries in the masculinity between legitimate and illegitimate births, the preponderance of boys being higher among the legitimate births by 1 or 2 per cent. The greater likelihood of the firstborn child of any mother being a male

¹ J. B. Nichols, "The Numerical Proportion of the Sexes at Birth, pub. in *Memoirs of the American Anthropol. Association*, vol. i, pp. 247-300. Fishberg, however, who quotes Nichols, casts some doubt upon the accuracy of the Jewish variation by suggesting that, for ceremonial reasons, female births are not reported so scrupulously, *The Jews*, p. 238.

² Newcomb, *The Probability of Causes of the Production of Sex in Human Offspring*, pp. 6, 8.

³ Cf. *Man and Woman*, pp. 499-500.

would, it might be supposed, tend to produce the opposite result, that is, slightly higher masculinity of illegitimate births. Possibly this tendency is counteracted by the higher rate of stillbirths among illegitimate births, a smaller proportion of male children being born alive. It is noteworthy that the variations from year to year are not very great. Darwin, who records sex-ratios of births in Europe corresponding to those given above, instances one example of a district where there was a consistent excess of female births: "At the Cape of Good Hope, male children of European extraction have been born during several years in the proportion of between 90 and 99 to 100 female children."¹

The greater frequency of stillborn boys to girls in England

ERRATUM.

Page 249. Para. 2, beginning "The greater frequency" to "second child", which escaped deletion in the proofs, should be omitted in the reading.

birth," it can at anyrate be shown that the sex-ratio at maturity is determined by different factors producing a different ratio. Our concern here is to establish correlations—an empirical task that is independent of any theory of sex determination.

We set out only with the legitimate assumption that there exists for every species within certain limits a sex-ratio among its reproductive individuals that is most compatible with its maximum reproductive vigour and viability, and that the evolutionary process of selection must tend to indicate the favourable ratios in the comparative survival values of homogeneous groups. If this is conceded the relevance of comparing all variations and fluctuations in the proportion between the sexes at different age categories of separate groups must be admitted.

Although we may find it convenient to allude in passing to

¹ Darwin, *Descent of Man*, part ii, p. 332, and pp. 374-99.

² Ibid., p. 376, and Ellis, *Men and Women*, pp. 478, 503.

³ Newcomb, *op. cit.*, p. 28.

⁴ Differential foetal mortality and a high primary sex-ratio determine the birth sex-ratio, see *ante*, p. 114.

some of the theories of sex determination which may seem to have some bearing on correlations, it is important to remember, as T. H. Morgan points out, that the elucidation of causes that may affect the sex-ratio, need throw no light at all on the causes that determine sex.¹

Generally speaking fluctuations and disturbances in the sex-ratio of all stages from birth to old age are affected by internal and external, or inter-related constitutional and environmental factors, producing a differential mortality of one sex. Variations in the sex-ratio at birth, it has been suggested, may be partly due to an original process of selection among germ-cells determining the percentage of survival of either male or female-producing gametes. The view that external conditions may actually be factors in determining sex, although admittedly they have some part in determining the ratio, is now generally abandoned by biologists.

Experiments designed to show that altered nutrition, temperature and other environmental changes can change the numerical proportion of male and female offspring, appear to have yielded on the whole negative results.² Heape, however, advances the view that variations in the human birth sex-ratio are governed by environmental—in the main nutritive or physical—conditions, "which affect both the vitality and the life of healthy ovarian ova and developing embryos, either directly or through the mother which bears them."³ The view that in man, as in many other animals, an internal mechanism exists by which sex is determined either at the moment of fertilization, previous to fertilization, or at some definite stage during embryonic life, and that the inheritance of sex conforms to Mendelian laws is now becoming more established than the physiological view of sex which discounts the existence "of any sex-determinant or factor at all, in the morphological or in the Mendelian sense, but that what settles the sex is an initial difference in the rate or rhythm of metabolism. This may also be expressed as a difference in the relation of nucleoplasm and cytoplasm as well as in the ratio of anabolism to katabolism."⁴

¹ Morgan's *Heredity and Sex*, p. 233.

² Morgan, p. 232 et seq., Thomson and Geddes, *Sex*, pp. 109-16.

³ "The Proportion of the Sexes produced by White and Coloured Peoples in Cuba," in *Trans. Roy. Soc.*, vol. cc (1908).

⁴ Thomson and Geddes, p. 113. On the other hand, consult R. Goldschmidt, *The Mechanism and Physiology of Sex Determination*, Engl. trans., 1923.

The sex-ratio not only varies between races and countries, there are distinct variations between groups and classes in the same population, and these sex-ratio variations bear some relation to the survival rate of the group.

The differential birth-rate and survival rate in England has been subjected to elaborate investigation. The statistics provided by the Registrar-General for England and Wales of the births in 1911 classified according to the occupation of the father, show that the birth-rate of groups classified in descending order of social grade is as follows :—

<i>Social Class.</i>	<i>Births per 1,000 married males aged under 55 years.</i>
1. Upper and Middle	119
2. Intermediate	132
3. Skilled Workmen	153
4. Intermediate Class	158
5. Unskilled Workmen	213

If we now examine the comparative survival rate for the same period we find that the same order is preserved—and that the lower social grades increase at least twice as fast as the higher social grades in which are found the skilled professions. For instance, in computing the comparative survival rate of the children of marriages in the different strata of society, if we take the rate that the offspring of marriages survive to maturity, in the 20–25 years of age category, for every 100 offspring in the whole population surviving to that age, there are 120 surviving offspring of coal-miners, while for the doctors offspring the ratio is only 59.¹

When the masculinity of different social groups in the same population is examined it is found that the masculinity of children decreases in those social groups that are increasing most rapidly and is highest in the social groups with the smallest survival rate; yet the whole population of England and Wales shows a decreasing masculinity. The proportion of boys to 1,000 girls in the decennium 1841–50 was 1,049; in 1891–1900 it had progressively declined to 1,036; in 1901–9 it had slightly risen to 1,037. "When the population is divided into social groups, in order of decreasing prosperity, Shirley

¹ "The Declining Birth-rate," being the *Report of the National Birth-rate Commission*, pp. 9–15.

Murphy has found that in the most prosperous group the proportion of boys is 1,049, regularly descending to 1,031 in the lowest social group."¹ This may be partly, but probably not entirely, accounted for by the fact that the size of families decreases in the same order, while owing to the slightly greater tendency for a woman's first child to be a boy, the tendency would affect the ratio of the sexes to a greater extent in the small than in the larger families. Professor Punnett, in order to refute the theory that the best nourished portions of a population produce a greater proportion of girls, has also shown from an examination of the official census figures for the County of London for the year 1901, that if the population of London is divided into three portions exhibiting graduated poverty it is found that the proportion of males to female infants that have survived is lowest in the poorest portion, highest in the wealthiest portion, and intermediate in the intermediate portion. It is highest of all in the number of births taken from Burke's Peerage, where nutrition may be supposed to be of the best.² As already pointed out it is possible to account for this result by pointing to various factors that would tend to bring it about, such as the slight masculine tendency of first births, differential infant mortality, a differential birth-rate and stillborn rate, and a differential marriage-rate. At the same time, whatever the causal factors, the correlations we seek to establish remain.

Under conditions of segregation or irrespective of other modifying factors, if the sex-ratio of reproductive or adult individuals shows a progressive masculinity, it is an index of, or is correlated with, a corresponding decrease of crude population. A tendency in any group or species to produce in increasing numbers masculinized or relatively sterile females is indicative of a tendency in the same direction.

I have been content to establish at this stage only the existence of a correlation between increments in masculinity and decrease of population, though we may discover indications suggesting that surplusage of adult males is a causal factor in producing a decline.

¹ Ellis, *Man and Woman*, p. 501.

² Quoted by Marshall, *op. cit.*, p. 649.

II

MARRIAGE SYSTEMS IN RELATION TO THE SEX-RATIO

We must now further examine the facts on which we arrive at the principle that for every species there is a normal sex-ratio of reproductive adults most favourable to its survival, and that this sex-ratio is dependent upon a differential survival or mortality rate of the sexes. The complete exclusion of a proportion of adult males (the true homo-sexual male should, for instance, be excluded) from the fertile females must be looked upon as equivalent, biologically, to their extinction, while the existence of a proportion of sterile females is equivalent to their subtraction from the computable number of reproductive females.

As already stated throughout the animal kingdom the sex-ratio of adults conditioning the organization of the means of reproducing the species is distinct from the sex-ratio at birth. The adult ratio, if expressed in a tendency for either one sex or the other to produce normally a constant surplusage, or for the two sexes to be numerically equivalent, may be accepted as an indication of the polygynous, polyandrous, or monogamous nature of the species. Many mammals and some birds are polygynous. Some species appear to be strictly monogamous, and some of the lower animals are polyandrous. It has often been noted that animals where the male is polygynous such as the gorilla, peacock, pheasant, stag, bull, or sea-lion, show well-marked dimorphous secondary sex-characters, although the correlation, in some birds, is not invariable.¹ Darwin held that some relation exists between polygyny and the development of secondary sex-characters. He also pointed out that the practise of polygyny leads to the same results as would follow, through the action of sexual selection, from an actual inequality in the number of the sexes, the stronger males securing each two or more females, while some of the weaker or less attractive males would remain unmated. The gorilla and the baboon, which live in herds containing twice as many adult females as males, are polygynous. The South American *Mycales caraya* generally lives with two or three wives. Most of the ruminants are polygynous, especially those showing well-marked secondary sex-characters, particularly in their weapons. The Asiatic antelope is the most inordinate polygamist in the world; for

¹ Cf. Thompson and Geddes, *Sex*, p. 78.

the male collects a herd of about a hundred females and kills and drives away all rivals. The wild horse of North America, the wild boar and the wild elephant of India, and the lion in South Africa are all known to have polygynous habits. In all these species the male differs from the female in secondary sex characteristics, chiefly in size, strength, and endurance. "Many species of seals," writes Darwin, "offer sexual differences, and they are eminently polygamous. Thus, according to Peron, the male sea-elephant of the Southern Ocean always possesses several females, and the sea-lion of Forster is said to be surrounded by from twenty to thirty females. In the North, the male sea-bear of Steller is accompanied by even a greater number of females. It is an interesting fact, as Dr. Gill remarks, that in the monogamous species, or those living in small communities, there is little difference in size between the male and female; in the social species, or rather those of which the males have harems, the males are vastly larger than the females."¹ On the other hand Darwin points out "there are certain animals (for instance fishes and cirripedes) in which two or more males appear to be necessary for the fertilization of the female; and the males accordingly largely predominate, but it is by no means obvious how this male-producing tendency could otherwise have been acquired". Darwin offers no explanation of these contrasts in the sex ratio of reproductive individuals, holding that the problem is "so intricate that it is safer to leave its solution to the future".² Darwin appears to have assumed originally that the normal sex-ratio at birth should determine the normal ratio at reproductive age, for he writes: "I formerly thought that when a tendency to produce the two sexes in equal numbers was advantageous to the species it would follow from natural selection," but as we have seen there is no reason to expect this. Beyond certain empirically established correlations which must be examined, it may be admitted that the root of the matter is now only slightly more advanced than it was where Darwin left it.

We start with the commonly observed fact of the constantly recurrent struggle among the males for the possession of the females. The strongest and most vigorous males or those endowed with the best developed fighting weapons, and sometimes

¹ *Op. cit.*, p. 337.

² p. 399.

also those in other ways most attractive to the females, tend to obtain the most attractive and the greatest number of females. Thus far we may follow Darwin's reasoning and assume that the males that outstrip or conquer the other males would leave a greater number of offspring to inherit their superiority than their beaten and less attractive rivals. Size, strength, and the secondary sex characteristics of the male would thus tend to become developed and accentuated among the polygynous animals. The stronger males would succeed in rearing the largest number of fine offspring, because they could drive away the weaker males and unite with the most vigorous or attractive females, of which they would obtain the predominant share. This state of things also obtains for the females united to the stronger males the conditions of seclusion and security from molestation from the attention of other males which are essential for successful breeding. Further, in polygynous species where there exist discrepancies in the periodicity and the incidence of the sexual impulse between the two sexes, a plurality of females secures the exemption of the breeding female during the gestatory and suckling periods from the attention of her own male. In the human species a surplusage of adult women alone insures the general monandry of the reproductive females. It can easily be understood that, where the proportion and pressure of unmated males is too great and the supply of mature females too deficient, the conditions most favourable to breeding will be proportionately diminished and the females will be most subject to molestation and distraction from their own and other males. This fact is acknowledged in principle, when, for instance, a preserver of pheasants towards the end of a season's shooting shoots only the cocks and spares the hens in order to ensure a greater number of wild birds and a better breeding season for the following year. Or inversely, when it is desired to exterminate a polygynous species, such as the rat or the rabbit, this result, it has been claimed, can be brought about by exterminating only the females and allowing the disproportion of the sexes to increase concomitantly with a diminishing fertility of the remaining females, until the breed dies out. In Australia it has been claimed¹ that experiments conducted on rabbits show that by artificially bringing about a big surplusage of adult male over female rabbits and thereby

¹ By Mr. Rodier.

changing their normal polygynous habits into polyandrous habits, not only is the *pro rata* fertility of each female rabbit correspondingly diminished, but that the influence of the polyandrous habit is also reflected in a smaller percentage of females born. It seems highly desirable that further experiments under test conditions should be undertaken in this direction.

Colonel Marshall in his study of the Todas (1873) advanced a similar argument to account for what he believed to be a tendency of these people to produce an increasing proportion of live-born males to females. The Todas are, or were, until recently, polyandrous in their marriages and formerly practised infanticide. The numerical excess of males over female children born alive, after the abandonment of infanticide, was 124 to 100. Assuming a male or a female-producing tendency to be capable of development through selection, Marshall argued that by destroying in greater quantities the daughters of those families in which females were produced in excess, and preserving all the males in those families in which females were produced in small proportion and males in large proportion, and preserving only a small proportion of the females coming of a female-producing family, "the bias strengthens with each generation, until, as we find, families grow to have habitually more sons than daughters. This habitude outlasting the depraved practice which caused it, indurates more or less into a fixed characteristic of the people: and a male-producing variety of man is formed."¹

It is quite possible, however, that, as among other peoples, female infanticide dates from a time when there was a surplus and not a deficiency of women, just as polyandry is an attempt to meet a shortage of women. Westermarck agrees that the polyandry of the Todas is attributable to a scarcity of women. Female infanticide which may have accentuated this scarcity was in all probability occasioned originally by the encroaches of the population or an inadequate food supply.² Later we may consider what bearing more recent, though still inadequate, vital statistics of the Todas may indicate as bearing on the fluctuations in their population.

We must now face the question, does man by nature belong to a monogamous, a polygynous, or a polyandrous species? Who, if they consider the well-marked differences in secondary

¹ *The Todas*, p. 111.

² Westermarck, *Human Marriage*, iii, p. 163.

sex characters, the greater size, strength, and vigour of man compared with woman, the discrepancy in the periodicity of the sexual function and impulse in the two sexes, the tendencies, which we are investigating for the polyandrous communities and groups to grow feeble and die out, the correlations between the masculinity of the adult population and fluctuations in population expansion and, finally, if they consider the actual habits of man all over the world, and at all times among nominally, but not actually, monogamous no less than among patriarchal and polygamous people, can have any doubt at all that man remains as he always has been a polygynous animal?

There can, at least, be no doubt that a true and universally monogamic population exists in no part of the world. "Regarding polygamy," wrote Schopenhauer, "there need be no dispute, for it is a universally existing fact, the only question is regarding its regulation." Indeed, what we in Christian countries call monogamy is in fact a disorderly mixture of polygyny and polyandry. Even in countries where, owing to the shortage of women, polyandry is practised, side by side with it polygyny also makes its appearance.¹

If we try to imagine for ourselves in broad outline some particular instance of a situation illustrating the theory of sex-ratio variation, we might imagine some completely isolated area, say an island in the Pacific, sufficiently endowed with the means of human subsistence and favoured by an equable climate. Let us picture next that a small number of human beings, male and female, set foot for the first time on this uninhabited island; and that from that day onwards without further intercourse with the outer world they spend the rest of their lives. Let us further suppose that all these human beings were of a mature and reproductive age, but the men slightly in excess of the women. If all the men and women were healthy and fertile and anxious to procreate, there are three principal ways in which they might organize themselves. Each man might take one wife and the surplus man or men forced to remain celibate and unmated, or two brothers or friends might share one wife so that each man had either a wife to himself or a share in a wife, or each of the stronger men might kill the weaker men and take more than one wife each, or finally, any combination of these three methods

¹ This for example is the case among the Todas, *vide* W. H. R. Rivers, *The Todas*, pp. 510-23.

might be adopted. According to the theory, apart from whether these islanders actually practised polygyny, monogamy, or polyandry, either one or two things would in the course of time be likely to happen. The surplusage of men would by some means gradually be overcome so that the adult women exceeded the adult men, in which case the population might be expected to increase to the full limit of the margin of subsistence, or on the other hand, the excess of men would be maintained and gradually increase until the islanders in the course of a few generations would gradually decrease in numbers and eventually become extinct.

The history of the first settlement of Pitcairn Island provides us with material for speculation as to what might have happened but for the benevolently intentioned interference of the New South Wales Government in terminating a very interesting anthropological experiment.

According to the well-known story, in the year 1789 the crew of the English ship *Bounty* mutinied and set their officers adrift in a small boat, and themselves put back to Tahiti. Here some of the crew left the ship and were afterwards apprehended and executed. The remainder consisting of nine Englishmen took with them six Tahitian men and twelve women and sailed to Pitcairn in the *Bounty* in 1790, where they ran the ship ashore and burned her. After this they remained unknown to the outside world for eighteen years. In 1808 the American whaler *Topaz* touched at Pitcairn, and the captain was surprised at being hailed in English by some half-caste youths in a canoe. These were the sons of the mutineers. The original problem of the distribution of the women had quickly been solved, for of the fifteen men who landed on the island in 1790 all but one, Alexander Smith, who renamed himself John Adams, were dead by the year 1800. Smith survived till 1829. When only three years had elapsed only four Englishmen, out of the total fifteen men who landed had escaped violent deaths, which followed disputes for the possession of the women; and these four men eventually came to some agreement as to the possession of the ten surviving women. In 1817 a passing ship reported that the island now contained a colony of sober and industrious inhabitants. Fearing that their numbers were increasing too rapidly for the accommodation of the island the authorities in Sydney determined to transplant them. The whole population, men, women, and children

were consequently moved in the *Lucy Anne* to Tahiti in 1831, where in a few months 17 of them died of disease. The following year they were returned to Pitcairn, but in 1856 they were once more removed and taken to Norfolk Island. From time to time other men attracted by stories of the island came and settled on Pitcairn between the time of the islanders' first and second removal. In 1856 they numbered 194 persons in all, consisting of 60 married men with their wives and 134 children. The proportion of the sexes at the time of their first removal in 1831 does not, unfortunately, appear to have been recorded; but the total population of Norfolk Island in 1868 was 300, the males and females being in exactly equal numbers.¹

If then we are driven to admit, as I think on the facts we are compelled to, that man, like the antelope, the wild boar, and the gorilla, belongs to a polygynous species, how can we account for the existence of communities, or of isolated groups within communities, adopting monogamous or polyandrous habits? An examination of the facts, as they actually exist, will show us that man is driven to practise actual monogamy or polyandry by one compelling circumstance alone—a deficit of women, or too great a surplusage of men. Whenever and wherever man is able to follow his inclinations and his normal (?) propensities he adopts polygynous habits and customs. Not only is this invariably true of all populations where a surplusage of women exists, but polygyny is found even where the sexes are equal or where women are in the minority. The monogamous forms of Christian countries are not of course determined by an existence of an exact equality in the numerical proportions of the sexes, they arose out of a pretended observance of a cult that considered plurality of wives immoral. Westermarck, although he does not admit the essentially polygynous propensity of the human race, admits that among savage tribes, at any rate, a surplusage of women invariably leads to polygyny. "Although our knowledge of the proportion between the sexes among the lower races is very defective, I think we may safely say that wherever there is a marked and more or less permanent

¹ Compare accounts in *The Naval Pioneers of Australia*, by Becke and Jeffery. *History of the Mutiny of the Bounty*, by Sir J. Barrow. Also articles in *Encycl. Brit.* and Stewart's *Handbook of the Pacific*, and reference in Darwin's *Descent of Man*, p. 295.

majority of women in a savage tribe, polygyny is allowed. I have found no reliable statement to the contrary, and cannot believe that savage customs would make monogamy obligatory if any considerable number of women were thereby doomed to celibacy."¹ But an excess of females is not, as already stated, by any means the only reason for polygamy, since it is frequently met with when the sexes are equal and sometimes even when the males are in excess. Polyandry, on the other hand, as an institution regularizing permanent marriage unions, and without referring to it as denoting the promiscuous and ephemeral relationships of the nominally monogamous countries, is at the present day, at any rate, only met with as an expedient designed to meet a serious shortage of women. "It appears," writes Westermarck, "that so far as direct evidence goes, it is only in a few areas that polyandry is, or has been, practised by a considerable number of the population, whilst among various peoples it has been restricted to more or less exceptional cases."²

If then polyandry is an indication of a serious shortage of women, and if a progressive disturbance in the balance of the sexes in the direction of an increasing deficit of women is a sure index of a declining population, the polyandrous communities, or those groups in a population that practise polyandry, must for so long have exhibited a tendency to disappear and to be supplanted by polygynous communities and groups.

If this proposition is valid, we may even legitimately suppose that the practice of polyandry is itself one of the direct causes, though by no means the only cause, of the decline and extinction of peoples. This possibility has, indeed, occurred to many writers. According to Westermarck, "various statements relating to polyandrous peoples rather support the view that intercourse between one woman and several men is unfavourable to reproduction." Rockhill, Sherring, Drew, and Knight adduce instances to show that polyandry results in small families; the latter observes that "in Ladakh polyandry has a striking tendency to keep down the population in more than one way; not only are fewer families founded than would be otherwise, but the families are smaller and the children are far between".³

¹ Westermarck, *Human Marriage*, iii, p. 64.

² *Op. cit.*, vol. iii, p. 155.

³ Quoted by Westermarck, *op. cit.*, vol. i, p. 386.

Darwin quotes Fenton's investigations into the decrease of the Maoris,¹ in the course of which Fenton concludes "on weighty grounds" that it depends chiefly on the unproductiveness of the women and the mortality of the young children, adducing as a further cause the growing inequality of the sexes, and the fact that fewer females are born than males.²

We may now turn from the general and theoretical survey of the subject to a more intensive examination of the demographic data which give support to it.

Of the few polyandrous communities that have been the object of careful and painstaking investigation, the Todas are possibly the best example; the vital statistics collected on these people, however, are very inadequate.

The early estimates of the population of the Todas are very unreliable and uncertain, and according to Dr. Rivers certainly far below the mark. Rivers accepts the census of 1866 as the first which gives anything approaching an accurate record of the Toda population. In his opinion "the records have probably been fairly complete since 1866, and if correct they show a falling off in population from this date till the 1881 census. It is, however, possible that the gradual increase in numbers during recent censuses has been due so the greater care taken at each succeeding census. Unsatisfactory as the records are, they seem to point to a diminution of population about the middle of the last century which ceased between 1880 and 1890, since which time the population has probably increased".³ Professor Punnett, who analysed the data furnished in Dr. Rivers' genealogical records, draws the conclusion that there has been a marked decrease in fertility during the period covered by the genealogies. This result is not arrived at without allowance for cases of female suicide, which according to Rivers is a custom certainly diminishing in frequency. Here, as in so many other instances, we find that infanticide cannot certainly be attributed as the prime or only cause of decrease, since progressive decrease continued after the abandonment or partial abandonment of a custom, whose origin can therefore be explained better, as Marshall explains it, by a former attempt to cope with a redundancy and not a shortage.

¹ *Observations on the Aboriginal Inhabitants of New Zealand*, pub. by the Government, 1859.

² Darwin, *Descent of Man*, p. 287.

³ W. H. R. Rivers, *The Todas*, p. 474.

Although Rivers is not inclined to agree with Marshall in this,¹ this view may, at the same time, be compatible with the former's conclusion that "there have existed among the Todas during the last fifty years, certain factors tending to diminish the population and one factor tending to increase it. We may conclude that, but for the diminution of infanticide, the falling off in numbers would have been greater, and that the tendency to increase which seems to exist at present may be due, wholly or in part, to the diminution of infanticide. There is one indication that female infanticide has almost entirely ceased during the last five years, i.e. up till 1902, and even that there may now be an excess of female births. In the table of ages it will be seen that the pedigrees record more girls than boys of five years and under".²

Probably the most potent cause of the decrease of the Toda population during the last century was that ubiquitous cause—the advent of Europeans. Rivers at any rate gives it most prominence. "There can be little doubt that any decrease in the Toda population about the middle of last century was the direct result of the changes brought about by the advent of Europeans to the Nilgiri Hills. The adverse influences which came into the lives of the Todas probably owe their origin to the large immigration of native servants and to the development of the bazaar. Though Europeans first began to come to the Nilgiri Hills about 1820, it was not till twenty or thirty years later that they arrived in any considerable numbers, so that it was probably the middle of the century before the injurious influences made their effects felt to any great extent."³

If the observable falling and subsequent rising tendency of the Toda population is strictly analogous to the tendencies shown elsewhere, as among the Maoris of New Zealand, the Red Indians of North America, and in many of the Pacific Islands, we must not omit the possibility that while the initial decline was due to a native inadaptability to changed and incompatible conditions induced by European interference, the subsequent tendency to recuperate may here be due to the gradual infusion of a foreign blood element which thereby changed the innate potential adaptability of the race to changed external conditions. Rivers, however, reports that in spite of the notorious promiscuity with which the Todas conducted

¹ *Ibid.* p. 479.

² *Op. cit.*, p. 480.

³ *Ibid.*, p. 476.

their sexual affairs, he did not see a great deal of evidence of miscegenation and not a great number of half-castes.¹

Turning now to fluctuations in the population in relation to fluctuations in masculinity, in so far as inadequate and approximate figures can help us, we may derive the following: The first census figures that Rivers accepts as of any value are those of 1866 which Grigg gives as 704. The census records for 1871 are conflicting, and the total population is given variously as 693, 683, and 639. In 1881 the total is given as 675. After 1881 subsequent census figures show a rise. "Unsatisfactory as the records are, they seem to point to a diminution of population about the middle of last century, which ceased between 1880 and 1890, since which time the population has probably increased . . . In 1891, the number had risen to 736; 424 males and 312 females. In the census of 1901, which was taken with especial care to record all the Todas, there were found to be 451 males and 354 females, making together 805."²

We may note that this increase in population of approximately 8 per cent in ten years accompanies a decrease of masculinity by nearly 3.0 (excess of males over females in 100 of both sexes combined) during the same period.

Professor Punnett, in his analysis of the data furnished by Rivers' genealogical records, shows that there is a marked and progressive decrease in the excess of men over women, corresponding roughly to the period when the population was increasing. Of the two districts or endogamous divisions between which the Toda families are divided, in one (Tartharol) for three succeeding generations the numbers of males for every 100 females are 159.7, 131.4, and 129.2, while for the other (Teivaliol) the figures are 259, 202, and 171. The Census Reports and the genealogical record thus agree in showing a progressive diminution in the excess of men over women.³

III

PROGRESSIVE MASCULINITY AS AN INDEX OF DECLINE, AND IN RELATION TO DIFFERENTIAL SEX-SURVIVAL RATES

We have examined the reasons that exist for the theory that a surplusage of adult females over males is a necessary condition of the stabilization and continued vigour of human

¹ *Ibid.*, p. 532.

² *Op. cit.*, p. 473-4.

³ *Ibid.*, p. 478.

racés. We have also seen that the proportion between the two sexes at maturity is determined principally by a differential mortality and survival rate of the two sexes. In those countries where adult women preponderate over adult men, the stillborn rate of males is higher than the stillborn rate of females, and the mortality of male children during the first four or five years of life much higher than that of female children. In the later age categories the occupations of men, whether civilized or savage, entail upon them a higher rate of mortality. It may, in fact, be expressed as a general law that among the polygynous species, man or animal, the females have a higher survival-rate than the males, *unless the group is declining*. It may be supposed that among polyandrous species the opposite is true, and the males show a superior survival rate. But there is, on that account, no reason to suppose that the greater mortality of one sex should tend to modify the sex-producing tendency of the species, although any slight tendency, whatever the cause, which a race might exhibit to produce a greater proportion of females would, of course, add to the chances of a still greater preponderance of mature females.

Where the masculinity of the whole population is given, it may be assumed to be considerably higher than the masculinity of the adult population. Very little, however, can be deduced from an extensive examination of the masculinity of civilized and settled countries owing to the heterogeneity of their populations, to the big differences in the rates of increase and decrease of social or of ethnically differing elements in the same population and to differences in their masculinity, as also to the variations which exist in the different districts in the same country. The rate of immigration or emigration is another factor influencing the apparent masculinity of populations; in densely populated countries where there are diminishing facilities for internal expansion a greater number of men than women emigrate, while in colonies, a greater number of men immigrate. In dense, closely settled populations the actual mean rate of increase bears little relation to the potentiality to increase or the viability of a race, owing to the factors necessarily limiting population, operating either upon birth-rate or death-rate, and keeping it at one level. For these reasons it is only actual decreases in population, or relative decreases of groups within the same population, that may profitably be correlated with variations

in masculinity. It is therefore upon data indicative of progressive masculinity in decreasing populations that our hypothesis is based. The determining causes of an excess of males may be various; all that can be put forward under this head has already been said, and we may have, for the present, to be content to leave the question of the exact determining cause of an excess of males with Darwin's assumption that "there may be some unknown law leading to this result in decreasing races, which have already become somewhat infertile".¹

In European countries, according to the censuses of the last two decades, Ireland and the Balkans alone showed a slight excess of males over females. If only adults had been reckoned the females would have been in excess.

<i>Country.</i>	<i>Year.</i>	<i>Excess of males over Females in each 100 of Population.</i>
Ireland	1919	1.08
Rumania	1915	0.75
Greece	1907	0.68

Ireland also shows the lowest rate of increase of European countries, varying from an actual mean annual rate of decrease during 1911 to 1916 of 0.21 per cent. to a mean rate of increase of 0.58 during the period 1916 to 1921.

Other European countries show at varying rates an excess of females. Thus France in 1901 showed 96.85 males to 100 females; Sweden in 1909, 95.67; Denmark and Norway in 1906 and 1900 respectively, 94; the German Empire (1910), 97.40; England and Wales together (1911), 93.67; if the figures for England and Wales are shown separately, however, there is a great contrast both in masculinity and the rates of increase. Portugal from the year 1900 consistently shows the biggest excess of females; as in 1900 the rate was 110 females to every hundred males, or 91.53 males to 100 females; the annual rate of increase between 1890-1900 being 0.74.

Variations in the masculinity of births, for reasons already stated, bear with relatively less importance upon the subject of our inquiry, which is independent of the question of sex determination. It may be noted, however, that in European countries variations in the masculinity of births appear to be correlated with profound and abnormal changes in the life of its people. For

¹ *Descent of Man*, p. 398.

instance, according to the Scandinavian biologist Savorgnan, in Great Britain and the German Empire there was a conspicuous increase in the percentage of male births in the latter years of the war. Referring to the latter's figures Professor Huxley makes the suggestion, of some interest and relevance, that this result may have been brought about by "war-conditions—whether these are nutritional or (more probably) dependent upon nerve strain acting through the sympathetic nervous system on the organism—converting some zygotes which in normal conditions would have been females into males".¹

Turning to non-European races from which we derive most of the data for the present inquiry, some fairly elaborate statistical information on the Red and Black races of North America is obtainable.²

In the United States of America there exist side by side three main groups of people that can be ethnically distinguished, and about which we possess with a nearer approach to approximate fullness than elsewhere, demographic records; these are the Reds, the Black, and the White races.

The task of comparing the rates of increase of these three ethnically distinct people living side by side in the same country under the same Government is by no means easy, owing to the striking variations shown by the population of each people among different component groups or classes within it, to the factor of immigration, and also owing to no race being segregated, so that a continual infiltration of blood takes place between the three stocks.

As already noted, of the three stocks the Indian alone appears in danger of eventual extinction. It is hard to compare the natural rates of increase of the Negroes and Whites owing to the white increase being greatly enhanced by immigration, while the net immigration or emigration of Negroes since 1810 has been inconsiderable.

The increase shown for the Negro population in the decade 1900-10 is equivalent to a constant annual increase of 1.07 per cent, at which rate it would, if maintained, double its population in sixty-five years. According to the official statisticians "it seems probable that the rate of natural increase of the

¹ *Eugenics Review*, Jan., 1922, vol. xiii, p. 549, and *Medical Science, Sex-Determination and Related Problems*, vol. x, May, 1924, pp. 110-11.

² See Appendix II and Appendix III.

native white population, and more particularly of the native white population of white parentage, during the decade 1900-10, did not very materially, if at all, exceed the rate of increase of the Negro population".¹

According to the census figures the numbers of Indians in the United States decreased between 1890 and 1900 but increased during the decade 1900-10.²

But, as the official Bulletin points out, since mixed bloods are enumerated as Indians, and there is an increasing amount of white blood in what is classed as the Indian population, the number of persons included in that class would tend to increase from census to census without any increase in the total amount of Indian blood or even with a decline in the full-blood population.³

The increases in the populations of Indians in America, as other authorities have also insisted, are due, with the exception of the Navaho tribe, to the growth of the mixed blood elements, to white men marrying Indian women. One large tribe, the Navaho, are pure-blooded and are increasing. Moorehead, moreover, points out that "the allotment plan, the accumulation of tribal funds, the increase in property values—all these factors induced many persons to 'get on the Indian rolls' and thus swell the numbers".⁴ For this reason, the population has increased from 248,813 in 1897 until it reached 333,702 in 1919. Previous to 1897 the population had probably decreased from 388,220, in 1850, to the census figures given for 1897.⁵ Previous to 1887, however, there exists considerable difference of opinion as to the exact number of Indians.

It is not difficult to perceive why the nomadic Navaho tribe of Arizona should provide the solitary exception of a large pure-blooded tribe that is increasing.⁶ The Navaho are the only relatively unspoilt Indians left in America. They have retained relatively more of their old culture, their old customs and habits of life, and they showed in 1910 the highest percentage of Indian

¹ *Negro Population in the United States*, p. 24, 1790-1915. Bureau of the Census.

² *Census returns.*

	United States.	Alaska.
1910	285,683	25,331
1900	237,186	29,531
1890	248,253	25,354

³ *Indian Population in United States and Alaska*, p. 10, pub. 1915.

⁴ *The American Indian*, by Warren K. Moorehead, pp. 21-3.

⁵ *Report of H.R. Schoolcraft*, U.S. Census gives 400,764.

⁶ See Appendix II.

tribesmen in the States, 91 per cent, who cannot speak English. Furthermore, and the point is important, the Navaho tribe still contains the largest proportion of polygamous men, notwithstanding the misdirected attempts of the Government and of missionaries to wipe out the custom. Out of 494 polygamous males reported in 1910, 327 were of the Navaho tribe.

We saw that polygamous marriages showed a somewhat higher average number of children than did monogamous marriages, but a lower average than that shown for mixed blood.¹ The proportion of surviving children for all pure marriages was 69.0 per cent, as against 79 per cent for all mixed marriages. Similarly polygamous marriages showed a higher average number of children surviving, 75 per cent, than did full-blood monogamous marriages, 69.0 per cent, but a lower average than that shown for mixed-blood marriages, 79 per cent. The rate of sterility is considerably higher among full-blood monogamous marriages (10.7 per cent) than among polygamous marriages (6.2 per cent), which is close to the average rate for all mixed bloods (6.7 per cent); but the rate is highest of all in marriages where husband and wife belong to different tribes (16.6 per cent). In the Navaho tribe 99.7 per cent of marriages are full-tribe (endogamous within the tribe).

These examples again illustrate that the popular theory that inbreeding in a race is conducive to sterility and decline is fallacious, and that another reason must be sought to account for the tendencies exhibited among declining races for cross-breeds to displace the pure stock.²

The possibility of maintaining the polygynous institutions of an aboriginal race intact is one of the best indications of its preservation as a race; and possibly the only alternative to its hybridization or extinction, which from the ethnological view-point come to virtually the same thing.

We have some indication of the progress of miscegenation among the Indians in the United States in the calculation that in 1910 56.5 per cent were full-bloods. Nine-tenths of the mixed-bloods are composed of white and Indian stocks.

¹ Average number of children per married women 15 to 44 years of age:—

Polygamous marriages (both full-blood)	4.7
Monogamous marriages (among full-bloods)	4.5
Mixed marriages	5.1

Indian Population in the United States, pp. 158, 159.

² See *ante*, Chapters VI and VII.

When we examined variations in the sex-ratios of the two coloured stocks in the United States, the Red and the Black, we found an excess of adult males in the stock—or more correctly that portion of the stock—that is decreasing and an excess of adult females in the stock—or the group—that is increasing. The white stock must here be left out of account for the reasons already referred to. In all new countries which yearly receive a large proportion of immigrants the number of men necessarily exceed the number of women, since more men than women migrate. As the country becomes settled and increases by propagation rather than by immigration there is a tendency for the surplusage of men to become eliminated. Although for the total white population of the United States males have exceeded females every year from 1820, yet taking Massachusetts and Maryland alone, the females in 1910 exceeded the males. The same occurs in Australia, where in each state the masculinity has steadily decreased.¹

Among the Red Indians generally we found a high masculinity, except in groups which are increasing, which show a lower masculinity. The elements that are increasing are mainly the mixed bloods; the exception, already referred to, is the Navaho tribe, which alone of the pure-blooded tribes is increasing considerably, and which alone of the pure-blooded tribes shows an excess of adult females (between ages 20–50). The masculinity of the Red and Black stocks compared showed conspicuous contrasts. In the Negro population of the United States males exceeded females from 1820 to 1840, while, from 1840 onwards females exceeded males. In 1910 there were 4,885,881 males and 4,941,882 females—a ratio of 989 males to 1,000 females. In the same year there were 135,133 Indian males to 130,550 females. If we examine the masculinity of the whole Negro population according to age categories we find there is a slight excess of females under 1 year of age, a marked excess from 15 to 29 years—the principal child-bearing ages—and a deficiency up to 85 with the exception of a few odd years. How these ratios are conditioned by a differential sex mortality rate is shown by the tables in Appendix III; Table II compares the sex-survival rates of Negro and white children. We observe too that the ratio of females to males is higher for the enumerated mulattos than those classified black. On the other hand

¹ See Appendix VII.

the ratio to males of 100 females in the principal Indian tribes is in general, though by no means invariably, less for the full-bloods than for the mixed-bloods; though evidence has been produced to show that in mixed Red Indian marriages there is a tendency for female children to be in a majority.¹ Westermarck quotes, amongst others, Powers, who in his *Tribes of California* wrote: "It is a curious fact, which has frequently come under my observation, and has been abundantly confirmed by the pioneers, that among half-breed children a decided majority are girls . . . Often I have seen whole families of half-breed girls, but never one composed entirely of boys, and seldom one wherein they were more numerous." Darwin quotes Dr. Coulter, who reported that the Californian Indians "reclaimed by the missionaries have nearly all perished", principally owing to a shortage of women.² We have shown, however, the unsoundness of the suggestion of Westermarck that there is "some ground for supposing that mixture of race invariably produces an excess of female births".³

The last opinion seems to be supported by Mr. Malcolm, who quotes against me instances of "more females born as the result of mixed marriages", but as his instances of lower masculinity as the result of miscegenation are not shown in correlation with increase or decrease of population, they do not in any way affect the argument.⁴ For we find that even in the same race there are groups in which a mixture with another race tends to produce an excess of females and groups in which it has a contrary tendency, but at the same time it does appear that only groups or elements that are declining show a progressive tendency to produce an excess of males, and that that tendency may be, and, as a rule, is arrested by mixing with another race, which, again is reflected by a tendency in the hybrids to produce more females and increase in crude population. The apparently inconsistent and contrary influences of cross-breeding upon the balance of the sexes is only explained if we correlate a

¹ "The greater preponderance of males shown among the mixed bloods than among the full-bloods in the United States is probably due in part to the tendency to report as white, Indian women of mixed blood who are married to white men. This theory is supported by a study of the sex distribution of children under five years of age, which shows that under this age the excess of males was somewhat greater among full-bloods than among mixed bloods." *Census Report*, 1910.

² *Descent of Man*, pp. 297-8.

³ Westermarck, *Human Marriage*, iii, p. 173.

⁴ L. W. A. Malcolm, "Sex-ratio in African Peoples," in *Amer. Anthropologist*, vol. xxvi, No. 4 (1924).

progressive disturbance in the balance of the sexes in favour of males with a declining tendency of the population. That is to say the preponderance of males noticeable in so many islands of the Pacific is a consequence or a correlation of the decline of the race due to general inadaptability to changed environmental conditions; under such conditions inbreeding must tend to preserve and fix the type and enhance the inadaptability, while intermarriage with alien types more suited to the new conditions, would equally tend to overcome the constitutional resistance of the original type, the new or hybridized type being less specialized and therefore more adaptable; the hybridized type exhibits a tendency to increase, which is again reflected in a restitution of the balance of the sexes in favour of the females. It must therefore be incorrect to attribute the preponderance of males in the Pacific islands, as Westermarck does,¹ to inbreeding. Because the two sets of facts may be coexistent in a declining race, there is no reason to suppose they will be coexistent, and there are several reasons for supposing they will not be coexistent, in an endogamous tribe or community adapted to its conditions and stable or increasing in population. Reference has already been made to the greater fertility and viability of the inbred Fijians under the old conditions. In the North American Indian stock there is a general tendency for masculinity to be lower for the full tribals than for the mixed tribals.

The clash of culture seems to have had similar consequences throughout Polynesia and Melanesia. As new conditions of life to which they were ill adapted were forced upon them, the population declined, and the men started to outnumber the women. Sometimes after an interval of three or four generations, the population was said to be increasing, while the surplus of men diminished. It has frequently been said that the race was becoming immunized to the evil consequences of changed conditions, to introduced diseases, etc. As we have seen the facts do not support such a suggestion. The aboriginal races do not become immunized or adapted but continue to die out until they are extinct or their place is often taken by a new hybrid race.

This, for example, seems to have been the story of the Maoris of New Zealand; the population declined until the influence of miscegenation swelled the population again; but the full-

¹ *Op. cit.*, p. 181.

bloods continued to decline, while the hybridized elements increased. With the increase of these elements the masculinity of the population decreased again. According to figures supplied by Dr. Buck, in a native school of 1,159 pupils in which approximately half the number were full-blood Maoris and half were mixed bloods difference in the proportion of the sexes was conspicuous. It was as 748 females to 1,000 males for the Full Maori to 926 females to 1,000 males for those with white blood.

Turning now to New Guinea and the Bismarck Archipelago, Europe's most recent acquisitions in the Pacific, we found the same drama being enacted : dying races mournfully watching their doom as they prepared to vacate their old hunting grounds in favour of the new hybrids whom, to use the terminology of the Peace Treaty, it is " the sacred duty of civilization to uplift ".

Statistics are unfortunately not forthcoming for an adequate analysis, but a few striking and similar features stand out. These are the very rapid and sudden decline of population, particularly among the so-called Micronesian elements, and the large and apparently increasing deficit of females. Figures published by the German *Amtsblatt* in 1914 show for the enumerated populations of the Bismarck Archipelago and the German Solomons 44,000 adult men to 35,000 adult women, and in Kaiser Wilhelmsland twelve thousand to ten. More intensive scrutinies yield the same results. The census figures for fifty-one villages in the Kawieng district of late German New Guinea in the years 1911, 1912 shows in every instance a big excess of men.¹ Aua Island (Durour) forms one of the two north-westerly islands of the Bismarck Archipelago, which in 1921 was populated by little more than 300 natives of a Malao-Polynesian blend, in which the Malay element predominates. A white man first set up a trader's shanty on the island in 1904, before which time little was known about the island. On this island I was able to investigate fluctuations in the balance of the sexes covering a period from about 1908 till 1921. One of the results of the analysis was to show a steady disproportion in the balance of the sexes, in favour of the men, accompanied by a corresponding decline in the total population.

¹ *Vide* Dr. Hoffman's Report in the *Amtsblatt für das Schutzgebiet Deutsch-Neuguinea*, June, 1913.

An analysis of the rising generation showed that the disproportion of the sexes was likely to increase; for instance, the relation between the number of boys and the number of girls below the age of 14 showed a deficit of 13 girls among 61 children, that is over 21 per cent, showing a greater deficit of females than is indicated by the total of all ages in the year 1920-1. Other factors entered which cannot be discussed here, but the general significance of the fact remains.

Matthies, and his partner Reimers, landed on Aua in 1904. Previously no white man had spent more than a few hours on the island. Parkinson, who had very little on which to base his estimate, estimated the population of Aua previous to the establishment of the Matthies's trading station on it, at 2,000. The island was certainly closely populated for its size, but 1,500 was more likely to have been the outside figure. From the time the white men landed the population shrunk in a remarkable way. After the ineffective effort to eject the white men the natives succeeded in murdering Reimers during Matthies's temporary absence. On his return practically the whole population of one district on the island took to their canoes and made for a neighbouring island in order to escape the revenge of the white men, and about eight hundred were drowned in their overcrowded canoes during a storm. Matthies, however, soon became reconciled with the natives, learned the language, and settled down with a native wife to a solitary life on the island. From 1911 he kept an annual nominal roll of every man, woman, and child on the island, and from these rolls my figures are compiled.

The most remarkable shrinkage in the population occurred between 1905 and 1909, which can only partially be accounted for by the epidemic of dysentery in 1909. Unfortunately there are no figures to indicate the progress of the decline in those early years.

The small size of the population and the short period during which exact statistics are obtainable makes it very hard to draw conclusive deductions from either fluctuations in the balance of the sexes or disturbances in the birth-rates and death-rates. The value and significance of these figures can, in any case, be reckoned only in conjunction with general results obtained elsewhere on a wider scale. On the other hand, it must be remembered that, although the population upon which the

rates are based is excessively small, the population itself was homogenous to a high degree, while its relative segregation and isolation made it possible to exhaust more thoroughly the great number of disturbing factors which in all cases must be reckoned with, and which become more complex and more numerous, in proportion, as the communities dealt with are larger, less homogenous and less isolated. Finally, it must be remembered that no satisfactory statistical data which have thrown any light upon the conditions of native races in the Bismarck Archipelago during the important period when they first came into contact with and under the control of white men exists, neither can they ever be obtained once that period has passed.

What appears to be of most significance in the Tables, Appendix VI, so far as inadequately small figures go, is their support of the familiar tendency for the female population to dwindle at a faster rate than the male population.

Previous to 1904, according to native accounts, there was a great surplus of women, sufficient to enable most men to have two wives each, by 1911 there was an excess of 49 males over females. During the 1911-21 period there was one principal abnormal disturbing factor, the epidemic of typhoid during the early part of the year 1916. This resulted in a very heavy death roll, and during that year and the following one 10 more men died than women. In spite of this fact, the masculinity of the population was actually greater by the end of 1921. Had the male and female deaths been equal in the years 1916-17, the excess of males over females would have increased to 60 in a population that in ten years had diminished by over 40 per 300. It is also noticeable that, in spite of the greater mortality of the men during the abnormal year 1916-17, during the whole period 1911-21 the female death-rate was slightly higher than the male death-rate.

There is another point to be noticed in this community. As soon as the balance between the sexes has been disturbed to the extent of a slight excess of men over women, the actual discrepancy is much greater than the apparent one. A close examination of such a community reveals the fact that the demands and needs of the unmated men result in a proportion of the unmarried women in every village becoming *puella publica*, the far less frequent alternative seems to be

the rise of a regularized system of polyandry. In the former case, the result is a further depletion of the already insufficient supply of wives, for the marital value of these women is greatly depreciated or destroyed in the eyes of the islanders; and in the latter, relatively infertile marriages. So we actually find that as the proportion of women decreases, an increasing number become communized to serve the promiscuous needs of the unmated men. It is obvious that these consequences react upon and further aggravate the situation.

According to native accounts before the landing in 1904, so far from a shortage of women, there had been a big surplus of women; a large proportion of commoners had two wives and the chiefs often four or more. The shortage of women came about with the shrinkage in the population, this shortage not only precluded any man having more than one wife, but led to a few instances of fraternal polyandry.

Another point of significance to be noted is the fact that the year 1916—the year of great sickness and the greatest death-rate—was also the year of the greatest number of male births. On the other hand, 1920 was an exceptionally healthy year, being marked by the absence of the almost annually recurring bout of malaria. In the latter year the births were 6 females to 2 males. The numbers involved are, of course, far too small to justify any confident deductions; in spite of their inadequacy they are, however, suggestive. Every fact, taken together and compared with the results obtained elsewhere, suggests that the periods of maximum health and virility in a race (and psychological factors must also be taken into account) are conducive to an excess of female over male births, while racial debility, sickness, and psychological factors, such as a waning interest in life, have the opposite tendency and favour an excess of male over female births.

Finally, as I have repeatedly pointed out, the differential sex survival rate is a factor of greater determining importance in relation to decline of population than the birth sex-ratio.

I have shown that a high masculinity in the adult population (or more strictly in the effective mating sex-ratio) is causally related to decline of population, and inversely that the sum of determining factors which cause maladaptation and decline bring about a disturbance in the balance of the sexes.

NOTE

SINCE this book has gone to Press, another dealing with some of the same and related subjects, under the title *Population Problems of the Pacific*, by an historian, S. H. Roberts, has made its appearance. While it would be impossible to notice the book in detail at this late hour, I may say that I welcome it if for no other reason than because it convinces me still more of the need for an entirely new point of view and a more systematic and philosophical method of tackling these questions.

Mr. Roberts has produced a carefully written book, well documented and full of interest. He rightly calls attention to the importance of psychological factors and emphasizes the usefulness of the institutions of *tapu* and magic, while he admits the far-reaching consequences of the breakdown of these customs. On the other hand, with a lack of consistency well calculated to bring him more popular than scientific support, he has sought to perpetuate in an academical and scholarly form many of the popular fallacies and delusions which it has been my task to expose and refute. He introduces us once more to the "innate-native-degeneracy" theory (for which his principal authority appears to be Professor MacMillan Brown) which absolves Europeans of any greater crime than of having accelerated by their advent the inevitable extinction of "this decadent people"; he confidently assumes a pre-European general decline of population in the Pacific, mentioning especially the Marquesas, Fiji, and Tahiti; here he relies on such earlier writers as De Bovis and W. Ellis, a contemporary administrator, Sir Hubert Murray, and again on MacMillan Brown. Cook's evidence on the Tahitian population he ignores or refers to as "exaggerated", the Memoirs of Arii Taimai he cannot have had access to. He is a strong advocate of "indirect rule" and favours with comfortable optimism "the judicious pruning" of evolving native institutions by that very variously defined ideal—the wise administrator. There is little virtue in preferring more efficient means to bring about a harmful end and, if the ends of indirect rule are

deculturalization and detribalization, direct rule by achieving them more rapidly might just as well be preferred. The alternative to both direct and indirect rule in the form these expedients are most usually presented to us can be described in terms of that firm though tolerant method which the present writer has likened to the colonial policy of the Roman Empire during her best period.¹ But Mr. Roberts and those who think with him hope to turn unnecessary and unwarranted European interference to good account by such an increase of it that it will transform the harm it has hitherto done into good by the suppression of native sorcery and "immorality" and the appointment of supervisory officials and medical men.

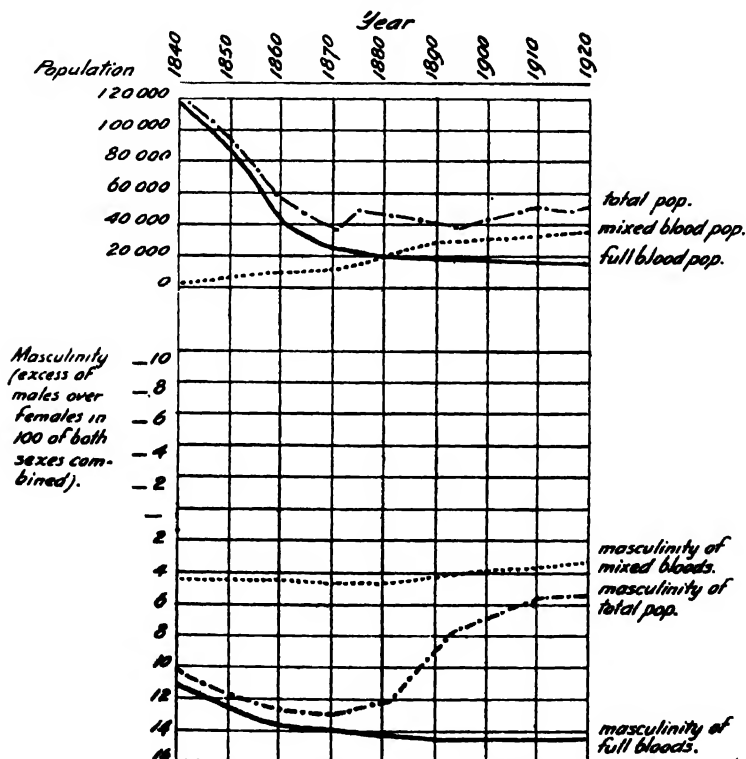
Among the most potent causes of decline Mr. Roberts instances infant mortality (which I have definitely shown has nothing to do with it) and "the absence of the maternal instinct". He adopts the recommendations of the Commission on Fijian Decrease of 1893 almost wholesale and with little critical discrimination, and does not regard the discussion of 1893 as out of date. We are not surprised that he welcomes increased missionary activity and, relying on the conciliatory attitude of Dr. Rivers towards missions, boldly claims that anthropologists are with him in this. Rather curiously, he even points with approval and qualified satisfaction to the missionary effort in Tahiti and Rarotonga. Naturally, he believes in the "readjustment period" or immunization theory, and advocates miscegenation without understanding that this implies substitution and not readjustment. The importance of native marriage systems and of sex-ratio variations he ignores, and makes but one solitary allusion to polygamy in order to state that the question is unimportant.

¹ See *ante*, p. 189.

APPENDIX I¹

MAORI POPULATION

Diagram illustrating estimated approximate correlations between decline and expansion of Maori population, miscegenation and variations in masculinity.



It will be noted that the upward rise in the masculinity curves indicates increasing femininity, ascent being in the direction of minus, and descent towards plus, masculinity.

N.B.—Owing to the insufficiency and unreliability of the

¹ Reproduced from "Variations in Sex Ratios as Indices of Racial Decline," by G. Pitt-Rivers. Pub. Proc. Second Pan-Pacific Science Congress (1923).

earlier vital statistics of the Maoris (as of the other Pacific races) the above diagram is only intended to serve as an illustration of the correlations that, with better and fuller data, should be established.

Although here masculinity of total population (all ages) in each group is estimated, it would be of greater value, if it were possible, to follow the variations in the masculinity of the adult reproductive population in each group, which owing to a differential sex mortality is invariably lower in increasing groups.

According to Fenton's evidence, the diminution of the Maoris began between the years 1830 and 1840, and there could have been very little miscegenation before 1830. But considering that the first New Zealand mission was established in 1814, and that muskets, which revolutionized their warfare and led to the abandonment of the old *pas*, were introduced at about the same time, it is probable that the diminution commenced considerably before 1830.

At the beginning of the nineteenth century, when the population was normal and stable, though warfare operated as a factor of male elimination, all indications point to an excess of females over males.

TABLE I

MAORI POPULATION

<i>Authority.</i>	<i>Year.</i>	<i>Population.</i>	<i>Males.</i>	<i>Females.</i>	<i>Masculinity.</i>	
Captain Cook	1769-1774	100,000 (400,000)				
Nicholas	1814	150,000				
Rev. W. Williams	1835	200,000				
(Estimate)	1835	120,000				
Estimate	1840	114,000				
Governor Gray	1849	120,000				
Mr. McLean	1853	60,000				
Judge Fenton	1858	55,970				
Estimate	1867	38,540				
Estimate	1871	37,520				
Colonial Government	1874	45,470				
"	"	1891	41,993	22,861	19,132	8.9
"	"	1896	39,854	21,673	18,181	
"	"	1901	43,143	23,112	20,031	7.1
Col. Govt. (Proper Census)	1906	47,731	25,538	22,193		
"	"	1911	49,844	26,475	23,369	6.2
"	"	1916	49,776	25,933	23,843	
"	"	1921	52,751	27,908	24,843	5.8
"	"	1925	54,450	28,684	25,766	5.3

TABLE II
FEMALES PER 1,000 MALES

<i>Year.</i>	<i>Maori.</i>	<i>European.</i>
1891	832	883
1901	866	903
1906	869	887
1911	882	896
1916 (War Census)	919	993
1921	890	959

TABLE III
THE INCREASING PROPORTION OF CHILDREN UNDER FIFTEEN YEARS OF AGE

<i>Census Year.</i>	<i>Males.</i>		<i>Females.</i>	
	<i>Over 15.</i>	<i>Under 15.</i>	<i>Over 15.</i>	<i>Under 15.</i>
1891	66.78	33.22	64.78	35.22
1896	64.72	35.28	63.18	36.82
1901	64.25	35.75	62.11	37.89
1906	61.74	38.26	60.80	39.20
1911	60.90	39.10	59.03	40.97
1916	58.65	41.35	58.57	41.43
1921	60.52	39.48	59.44	40.56

TABLE IV
DILUTION OF MAORI POPULATION
External Dilution is shown in the following table

<i>Year.</i>	<i>Ratio of Maoris to Europeans.</i>	
	<i>European Population.</i>	<i>No. to 1 Maori.</i>
1891	626,658	14.9
1896	703,360	17.6
1901	772,719	17.9
1906	888,578	18.6
1911	1,008,468	20.2
1916	1,099,449	22.
1921	1,248,216	23.6

TABLE V
MISCEGENATION

Half-caste Maori Population

<i>Census Year.</i>	<i>Living as members of Maori tribes.</i>	<i>Living as and among Europeans.</i>	<i>Total.</i>
1891	2,681	2,184	4,865
1896	3,503	2,259	5,762
1901	3,133	2,406	5,539
1906	3,938	2,578	6,516
1911	4,181	2,879	7,060
1916	3,529	3,221	6,750
1921	3,116	4,236	7,352

For the year 1916, by adding the 3,221 half-castes living as Europeans to the Maori census, and taking the total of 6,750 half-castes as a percentage of the added Maori population, the percentage of half-castes works out at 12·7 per cent.

This does not give the amount of blood dilution, as many with white blood are counted as full Maoris.

In the Maori Pioneer Battalion, on the returning troopship in 1919, out of 814 men examined by Dr. Buck, the following was found :—

Full Maori . . .	424	52 per cent.
With white blood . .	390	48 „

From ninety-four Native Schools, out of 4,039 pupils the following results were obtained :—

Full Maori . . .	2,016	49·9 per cent.
With white blood . .	2,023	50·1 „

The pupils with white blood were distributed as follows :—

Three-fourths Maori .	1,097	27·1 per cent.
Two-fourths „ .	457	11·3 „
One-fourth „ .	127	3·1 „
Other fractions .	342	8·4 „

TABLE VI

NOTE ON FULL-BLOOD AND MIXED-BLOOD SEX-RATIOS

Balance of Sexes

In the returns filled in by Native School Teachers (1921), many only gave the total of males and females, and did not distinguish the numbers in the various classes. However, some of them did so for a total of 1,159 pupils. The result of the sex distribution amongst full Maoris and those with white blood shows a significant variation.

	<i>Males.</i>	<i>Females.</i>	<i>Females per 1,000 Males.</i>
Full Maori . . .	318	238	748
With white blood . .	313	290	928

TABLE VII

MAORI BIRTHS: (CENSUS OF 1921)

The number of births of Maoris registered during 1921 was 1,056 (571 males, 485 females), representing a rate of 20 per 1,000 of Maori population.

MAORI DEATHS: (CENSUS OF 1921)

<i>Males.</i>	<i>Females.</i>	<i>Totals.</i>	<i>Under Main Act.</i>
485	307	792	18

Refer: *New Zealand Official Year Books*. Also refer to Dr. Buck's "Passing of the Maori" (*Trans. N.Z. Inst.*, vol. lv (1924)). Some of the information contained in above tables was communicated privately by Dr. Buck who, in sending me the information given in Table VI (p. 374 of his paper), refers to it as "significant support given to your views".

APPENDIX II

NORTH AMERICAN INDIAN POPULATION

Where no exact reference to authorities is made in any of tables following, which deal with populations in the U.S.A., they are compiled from figures published by the U.S. Bureau of the Census (Dept. of Commerce).

TABLE I

The following table gives various information for 1910 concerning the four most pure-blooded Red Indian tribes for which comparative statistics of increase can be obtained.

	<i>Arapaho.</i>	<i>Navaho.</i>	<i>Laguna.</i>	<i>Pima.</i>
Stock	Algonquin	Athapascan	Keresao	Piman
District	Wyoming	Arizona	N. Mexico	Arizona
	Oklahoma	N. Mexico		
	Utah			
Population	1,419	22,455	1472	4,236
Percentage :				
Full-blood	92.4	99.3	96.9	98.6
Full-tribal	96.8	99.7	97.8	96.7
Males to 100 females :				
Full-blood	104.5	101.9	107.1	107.0
Population :				
Under 20 years	43.0	58.3	50.7	50.2
20-50 years	42.4	33.3	36.8	34.9
Over 51 years	13.7	8.1	12.6	14.6
Males to 100 females :				
Under 20 years	101.3	104.2	99.5	105.7
20-50 years	107.6	98.7	114.7	113.0
Over 51 years	—	101.3	—	105.0
Unable to speak English :				
(20 years and over)	48.8	91.0	70.7	67.0,

(U.S. Bureau of the Census, *Indian Population in the United States and Alaska, 1910.*)

TABLE II

POPULATIONS OF THE FOUR RED INDIAN TRIBES WITH GREATEST PERCENTAGE
OF FULL-BLOOD. (EARLY FIGURES APPROXIMATE.)

<i>Year.</i>	<i>Arapaho.</i>	<i>Navaho.</i>	<i>Laguna.</i>	<i>Pima.</i>
1860 . .	—	—	927	—
1871 . .	—	—	927	—
1875 . .	3,229	—	—	—
1876 . .	—	11,868	—	—
1880 . .	3,045	—	—	—
1881 . .	—	—	968	—
1885 . .	2,298	—	—	—
1886 . .	—	17,358	—	—
1890 . .	1,925	—	986	4,421
1894 . .	—	(over 2,000)	—	—
1895 . .	1,869	—	—	4,266
1900 . .	1,782	—	1,077	4,350
1904 . .	—	21,379	—	—
1905 . .	1,768	28,544	—	3,900
1910 . .	1,753	22,304	1,472	4,305

TABLE III

PERCENTAGE UNDER 20 YEARS OF AGE AND NUMBER OF POLYGAMOUS MALES
IN NINE INDIAN TRIBES IN YEAR 1910

<i>Tribe.</i>	<i>Percentage under 20 years of age.</i>	<i>Number of polygamous males.</i>
Navaho . .	58.3	327
Teton Sioux . .	44.7	35
Apache . .	49.0	22
Paviotso . .	37.8	13
Piegán . .	52.2	13
Cheyenne . .	40.3	9
Kiowa . .	56.3	9
Shoshone . .	41.3	9
Ute . .	44.8	8

(U.S. Bureau of the Census, *Indian Population of the United States and Alaska*,
1910, pp. 55, 56, 162.)

TABLE IV

STERILITY IN WOMEN 15-44 YEARS OF AGE MARRIED ONE YEAR OR MORE,
AMONG THE NORTH AMERICAN INDIANS AND MIXED-BLOODS

Degree of Mixture.	Total number tabulated.	Bearing no children.	
		Number.	Per cent.
All classes	21,532	1,853	8.6
<i>Marriages among full-bloods</i>	10,379	1,111	10.7
Husband and wife belonging to same tribe	9,820	1,018	10.4
Husband and wife belonging to different tribes	559	93	16.6
<i>Mixed Marriages</i>	10,752	717	6.7
<i>Marriages of full-bloods with mixed-bloods</i>	1,508	133	8.8
Wife full-blood, husband white and Indian	914	77	8.4
Husband full-blood, wife white and Indian	594	56	9.4
<i>Marriages of full-bloods with whites</i>	208	16	7.7
Wife full-blood, husband white	208	16	7.7
Husband full-blood, wife white	—	—	—
<i>Marriages amongst mixed-bloods</i>	3,970	276	7.0
Wife white and Indian, husband white and Indian	3,675	254	6.9
Wife Negro and Indian, husband Negro and Indian	101	10	9.9
Wife white, Negro, and Indian, husband white, Negro, and Indian	194	12	6.2
<i>Marriages of mixed-bloods with whites</i>	5,066	292	5.8
Wife white, husband white and Indian	2,336	174	7.4
Husband white, wife white and Indian	2,730	118	4.3
Polygamous marriages (husband and wives probably full blood Indians)	401	25	6.2

(Indian Population in the United States and Alaska, 1910, p. 157.)

TABLE V

PROPORTION OF CHILDREN SURVIVING IN 1910, OF WOMEN BETWEEN THE AGES OF 15 AND 44 WHO HAD BEEN MARRIED FROM 10 TO 20 YEARS, AMONG FULL-BLOOD AND MIXED-BLOOD NORTH AMERICAN INDIANS

Degree of Mixture.	Children born.		
	Total number.	Number.	Per cent.
All classes	36,277	11,476	69.7
<i>Marriages among full-bloods</i>	16,469	11,476	69.7
Husband and wife belonging to same tribe	15,678	10,970	70.0
Husband and wife belonging to different tribes	791	506	64.0
<i>Mixed Marriages</i>	19,127	15,119	79.0
<i>Marriages of full-bloods with mixed-bloods</i>	2,720	1,902	69.9
Wife full-blood, husband white and Indian	1,678	1,195	71.2
Husband full-blood, wife white and Indian	1,042	707	67.9
<i>Marriages of full-bloods with whites</i>	485	402	82.9
Wife full-blood, husband white	485	402	82.9
Husband full-blood, wife white	—	—	—
<i>Marriages amongst mixed-bloods</i>	7,322	5,681	77.6
Wife white and Indian, husband white and Indian	6,786	5,280	77.8
Wife Negro and Indian, husband Negro and Indian	188	152	80.9
Wife white, Negro, and Indian, husband white, Negro, and Indian	348	249	71.6
<i>Marriages of mixed bloods with whites</i>	8,600	7,134	83.0
Wife white, husband white and Indian	3,731	3,095	83.0
Husband white, wife white and Indian	4,869	4,039	83.0
Polygamous marriages (husband and wives probably full-blooded Indians)	681	516	75.8

(U.S. Bureau of the Census, *Indian Population in the United States and Alaska*, p. 158.)

TABLE VI

AVERAGE NUMBER OF CHILDREN PER MARRIED WOMAN AMONG NORTH AMERICAN INDIANS AND MIXED-BLOODS TABULATED BY DEGREE OF MIXTURE OF BLOOD :
WOMEN 15 TO 44 YEARS OF AGE, MARRIED 10 TO 20 YEARS, IN 1910

Degree of Mixture	Children born.		
	Total number.	Surviving Number	Per cent.
All classes	7,548	36,277	4.8
<i>Marriages among full-bloods</i>	3,658	16,469	4.5
Husband and wife belonging to same tribe	3,480	15,678	4.5
Husband and wife belonging to different tribes	178	791	4.4
<i>Mixed Marriages</i>	3,745	19,127	5.1
<i>Marriages of full-bloods with mixed-bloods</i>	530	2,720	5.1
Wife full-blood, husband white and Indian	324	1,678	5.2
Husband full-blood, wife white and Indian	206	1,042	5.1
<i>Marriages of full-bloods with whites</i>	90	485	5.4
Wife full-blood, husband white	90	485	5.4
Husband full-blood, wife white	—	—	—
<i>Marriages among mixed-bloods</i>	1,385	7,322	5.3
Wife white and Indian, husband white and Indian	1,286	6,786	5.3
Wife Negro and Indian, husband Negro and Indian	36	188	5.2
Wife white, Negro, and Indian, husband white, Negro, and Indian	63	348	5.5
<i>Marriages of mixed-bloods with whites</i>	1,740	8,600	4.9
Wife white, husband white and Indian	777	3,731	4.8
Husband white, wife white and Indian	963	4,869	5.1
Polygamous marriages (husband and wives probably full-blood Indians)	145	681	4.7

Note marriages in which both husband and wife represented a mixture of white, Negro, and Indian blood, the average number of children was higher than for any other group, viz. 5.5.

(U.S. Bureau of the Census, *Indian Population in U.S.A. and Alaska*, p. 158.)

TABLE VII

FERTILITY AND VITALITY AMONG SOME OF THE LARGER NORTH AMERICAN INDIAN TRIBES OR GROUPS

(Only women of full-blood with husbands also of full-blood of the same tribe, and mixed-blooded women of white and Indian blood with husbands also of mixed-blood, are considered.) Includes women married from one year upwards.

1. Parents full-blooded

<i>Tribe or group.</i>	<i>Per cent of women bearing no children.</i>	<i>Average number of children born.</i>	<i>Per cent surviving of total children born.</i>
Navaho	9.3	3.5	85.9
Yuman	17.5	2.2	81.3
Cherokee	7.3	3.7	71.8
Apache	7.9	3.7	69.4
Chippewa	10.3	3.7	64.2
W. Washington (mainly Salish)	3.9	4.8	56.6
Sioux	7.6	4.1	56.4

2. Parents white and Indian

<i>Tribe or group.</i>	<i>Per cent of women bearing no children.</i>	<i>Average number of children born.</i>	<i>Per cent surviving of total children born.</i>
W. Washington (mainly Salish)	x	x	82.2
Cherokee	6.4	3.5	82.0
Sioux	6.9	4.1	77.6
Chippewa	6.7	4.6	72.7
Apache	x	x	x
Navaho	x	x	x
Yuman	x	x	x

(U.S. Bureau of the Census, *Indian Population in the United States and Alaska*, 1910, p. 160.)

TABLE VIII

The following shows for 1910 the reported number of males to 100 females among white and North American Indian mixed bloods, by degrees of mixture.

	<i>Males to 100 females.</i>
All white and Indian mixed-bloods	106.2
Less than half white	108.6
Half white and half Indian	108.0
More than half white	104.3

Among North American Indians of full-tribal and mixed-tribal blood :—

	<i>Males to 100 females.</i>
Total full-blood Indians	101.7
Full-tribal blood	101.2
Mixed-tribal blood	109.3
Two tribes	110.5
Three or more tribes	101.7

NOTE.—Owing to degree of mixture being necessarily only approximate, there may be errors in classification.

The following shows the proportion of males to females among children under five years of age :—

	<i>Males to 100 females.</i>
Full-blood	103·7
Mixed-blood	102·4

Masculinity among Red Indians

Males to 100 females

	<i>United States.</i>	<i>Alaska.</i>
1910	103·5	105·3
1900	101·5	103·9
1890	102·6	105·2
1910.	<i>United States.</i>	<i>Alaska.</i>
Full-blood	101·7	106·2
Mixed-blood	106·4	100·3

As the number of mixed-bloods in Alaska was comparatively small, no reliable conclusions can be based on the sex distribution among them.

All the full-blood Indians in the States except in Washington, Oregon, Idaho, Montana, North Dakota, South Dakota, and Minnesota, show an excess of males.

Among mixed-blood Indians, all states except North Dakota and Nevada show an excess of males. Refer, *Indian Population in the United States and Alaska*, pp 43-6, 700.

APPENDIX III

NEGRO POPULATION

TABLE I

THE PROPORTION OF MALE AND FEMALE DEATHS PER 1,000 IN 1915

	<i>Negro.</i>	<i>Male.</i>	<i>Female.</i>
Under 1 year		157	139
Up to 10 years		Even proportions.	
15 to 19		36	50
20 to 24		61	72
25 to 29		65	70
30 to 34		64	63
35 upwards		Male deaths slightly in excess.	

Negro deaths between ages of 15 and 44 exceed those of whites, after 44 whites exceed Negro.

(U S Bureau of the Census, Dept. of Commerce, *Negro Population of the United States, 1790-1915*, p 303)

TABLE II

A COMPARISON IN THE SURVIVAL RATE OF NEGRO AND WHITE CHILDREN IN THE UNITED STATES

1910

Of 100,000	Negro	male children	78,065	survive the first year.
"	"	female	81,493	" " "
"	White	male	87,674	" " "
"	"	female	89,774	" " "
Of 1,000	Negro	males	614	survive to the age of 20.
"	"	females	648	" " "
"	White	males	791	" " "
"	"	females	817	" " "

Thus 37.1 per 1,000 more males die in Negro population under 1 year of age than females ; 27.8 more males die than females under 1 year in the white population.

(U.S. Bureau of the Census, Dept. of Commerce, *Negro Population of the United States, 1790-1915*, p. 311.)

APPENDIX III

TABLE III
NEGRO POPULATION OF U.S.A.
Registration Area

Racial Class	Population			Deaths in calendar year		Deaths per 1,000 population		
	Enumeration of 15th April, 1910.	1st July, 1910 (estimate).	1st June, 1900.	1910	1900	1910	1900	
All classes	53,620,262	53,943,896	30,765,618	806,412	539,939	15.0	17.6	2.6
Negro	1,935,976	1,943,989	1,180,023	49,499	94,065	25.5	29.4	3.9
White	51,472,967	51,880,621	29,505,687	753,908	503,569	14.6	17.1	2.5
Other	211,319	219,106	70,908	2,005	1,375	11.9	19.4	7.5

TABLE IV

COMPARISON OF NEGRO DEATH RATE WITH RATE FOR OTHER CLASSES : 1910

In this Table the number of deaths per 1,000 population in each race, nativity, and parentage class is given for 1910. The rates in this table are figured upon the populations in each class as enumerated in 15th April, 1910, no estimates for 1st July being undertaken in detail by classes. The rates for Negroes and whites and for all classes combined are not materially affected by this slight change in the population base, as may be seen by comparison of this Table with Table III, the rate for Negroes in 1910, for example, being 25.5 in Table III and 25.7 in this Table.

	Registration Area : 1910. ¹		
	Population April 15th, 1910.	Deaths : Calendar year 1910.	
		Number.	Per 1,000 population.
All classes	53,409,475	801,735	15.0
Negro	1,868,407	47,989	25.7
White	51,331,794	751,121	14.6
Native ²	39,808,911	554,417	13.9
Native parentage ³	24,654,457	353,082	14.3
Foreign parentage	10,667,210	148,456	13.9
Mixed parentage	4,587,244	52,879	11.5
Foreign born	11,422,883	196,704	17.2
Indian, Chinese, Japanese, and all other	211,274	2,625	12.4
Indian	80,266	886	11.0
Chinese	63,960	1,055	16.5
Japanese	64,419	664	10.3
Other	2,629	20	7.6

¹ Except cities in North Carolina of less than 10,000, for which population data in detail by classes shown are not available.

² Includes unknown nativity.

³ Includes unknown parentage.

Considerable allowance must be made for the possibility of error in the data for the several parentage classes—error in the return of parentage for population and for deaths, and error resulting from the distribution of population and deaths of unknown parentage. Comparisons of Negroes and white classes with the Chinese and Japanese are of little significance, owing to the abnormal race distribution of the Chinese and Japanese, and comparison of natives with the foreign-born whites also in a lesser degree are invalidated by differences in the age composition of the several classes. Finally, it is not improbable that a larger proportion of Indian than of other deaths escape registration, with the result that the Indian death rate is depressed relatively to rates for other classes.

The most significant comparison in this Table is that between Negroes and native whites, which show death rates, respectively, of 25.7 and 14.6. A further analysis of the data is, however, required to separate so far as possible the urban from the rural elements in these classes.

Reference Bureau of the Census (Dept. of Commerce), *Negro Population of the United States, 1790-1915*, p. 305.

APPENDIX IV

SAMOAN POPULATION

TABLE I
POPULATION OF AMERICAN SAMOA

<i>Year.</i>	<i>Total.</i>	<i>Tutuila.</i>	<i>Manua.</i>
1920	8,056	6,185	1,871
1916	7,550	5,885	1,665
1912	7,251	5,454	1,797
1908	6,780	4,925	1,855
1903	5,888	4,193	1,695
1901	5,563	3,960	1,603
1900	5,679	3,923	1,756

POPULATION BY SEX

	1920.	<i>Mascu- linity.¹</i>	1916	<i>Mascu- linity.¹</i>	1912.	<i>Mascu- linity.¹</i>
American Samoa						
Males	4,139	2.76	3,939	4.34	3,836	5.81
Females	3,917		3,611		3,415	
Tutuila Island						
Males	3,181	2.86	3,089	4.98	2,872	5.32
Females	3,004		2,796		2,582	
Manua Island						
Males	958	2.41	850	2.10	964	7.29
Females	913		815		833	

NOTE.—Mixed-bloods (for the most part the children of white fathers and Polynesian mothers) constitute about 3 per cent of the population. No estimate is given of natives having a smaller proportion of white blood.

POPULATION BY SEX AND AGE

	<i>Number.</i>		<i>Per cent.</i>		<i>Distribu- tion.</i>
	m.	f.	m.	f.	
Under 5 years	641	630	15.5	16.1	
5 to 9 years	557	545	13.5	13.9	
10 " 14 "	410	363	9.9	9.3	
15 " 19 "	379	332	9.2	8.5	
20 " 24 "	336	354	8.1	9.0	
25 " 34 "	686	774	16.6	19.8	
35 " 44 "	554	429	13.4	11.0	
45 " 64 "	468	394	11.3	10.1	
65 years and over	108	96	2.6	2.5	

NOTE.—Observe that from the age of 20 to 34 females exceed males. .
(Bulletin of U.S. Dept. of Commerce, *Census of American Samoa*, 1920.)

¹ Masculinity here means the excess of men over women in a population of 100 of both sexes.

APPENDIX V

AUSTRALIAN ABORIGINAL POPULATION

TABLE I

ESTIMATED FULL-BLOOD AUSTRALIAN ABORIGINAL NATIVES AT CENSUS OF 1911

Particulars.	N.S. Wales	Victoria.	Queensland.	South Aust.	Western Aust.	Tasmania	Northern Territory	Commonwealth
<i>Males</i>	1,152	108	5,145	802	8,433	2	743	11,385
<i>Females</i>	800	93	3,542	637	2,986	1	480	8,554
<i>Total</i>	2,012	196	8,687	1,430	6,369	3	1,223	19,939
<i>Masculinity (a)</i>	14.51	5.10	18.45	11.47	7.80	33.31	21.50	14.20

(a) Excess of males over females per 100 of the sexes combined.

From O.Y.B. of Aust. No. II

"The number of aboriginal natives enumerated in the several States and Territories of the Commonwealth at the Census of 1911 was as shown hereunder, the figures given relating, as before stated, only to those in a civilized or semi-civilized condition.

"These figures, as noted, refer only to those natives who were, at the date of the Census, in the employ of whites or were living in contiguity to the settlements of whites."

From O.Y.B. of Aust. No. 14

"In connexion with the Census of 1921, special arrangements were made with the Chief Protectors of Aboriginals in the several States, and as a result of the careful inquiries made by them, an enumeration was made of the full-blood aboriginals of Australia, which, although still incomplete, probably represents a much closer estimate than has been available previously in connexion with the taking of a Census. The most serious defect on the present occasion is an estimate of 10,000 aboriginals which the Chief Protector of Western Australia regards as out of touch with his Department, and consequently not included in the figures supplied by him. Taking these into account, and adding them to the numbers otherwise recorded either by the Census

Collector or by officers of the Aborigines' Protection Department, the total in Australia at 4th April, 1921, may be stated approximately as follows :—

ESTIMATED FULL-BLOOD AUSTRALIAN ABORIGINES, 4TH APRIL, 1921

Particulars.	N.S. Wales.	Victoria.	Queensland.	South Aust.	Western Aust.	Northern Territory.	Total Commonwealth
<i>Males</i>	870	62	7,234	876	13,611	9,406	32,129
<i>Females</i>	622	49	5,380	733	11,976	7,883	20,643
<i>Total</i>	1,501	111	12,614	1,609	25,587	17,349	58,771
<i>Masculinity</i>	17·12	11·71	14·69	8·68	6·38	9·12	9·33

"In the above table the 10,000 estimated as in Western Australia out of touch with civilization have been treated as 5,000 males and 5,000 females. From the foregoing it would seem that the marshalling of every aboriginal of full-blood in Australia would fail to muster a total of 60,000 at the present time."

APPENDIX VI

BISMARCK ARCHIPELAGO POPULATION

TABLE I

TERRITORY OF NEW GUINEA NATIVE POPULATION, 1914

ISLANDS	COUNTED.				Total Counted.	Estimated.	Total.
<i>Bismarck Archipelago.</i>							
New Britain, Duke of York, and Vitu Islands—Gazelle Peninsula and adjacent islands	9,351	8,169	5,720	4,613	27,853	15,000 ¹	85,626
Remainder of New Britain	4,640	4,349	3,159	2,025	15,073	27,700 ¹	—
Duke of York Group	886	790	726	638	3,040	—	3,049
Vitu Islands	867	794	516	346	2,523	—	2,523
Total New Britain, etc	16,044	14,111	10,121	8,222	48,496	42,700	91,196
<i>New Ireland and Lavongai (New Hanover).</i>							
New Ireland (District of Namatanai)	4,758	3,687	1,757	1,537	11,739	2,500	28,988
New Ireland (District of Kavieng)	6,815	4,520	1,903	1,511	14,749	—	
Islands between New Ireland and Lavongai	354	254	127	70	811	—	811
Lavongai	2,820	2,027	945	718	6,539	—	6,539
Mussau, Emirau and Tench Island	720	680	425	326	2,160	800	2,960
Tabar and Simberi Islands	1,029	1,179	978	297	3,483	—	3,483
Lihir Islands	1,185	850	409	313	2,818	—	—
Tonga Islands	547	452	135	107	1,241	1,000	5,692
Anir Islands	277	200	82	74	633	—	
Total New Ireland & Lavongai, etc.	10,138	13,849	6,232	4,950	44,173	4,300	48,473
<i>Admiralty and North-Western Islands.</i>							
Admiralty Islands	1,505	1,004	838	699	4,736	7,500	12,236
North-Western Islands	409	331	136	116	992	—	992
Total Admiralty and North- Western Islands	1,914	2,025	974	815	5,728	7,500	13,228
Total Bismarck Archipelago	37,091	29,985	17,327	13,006	98,399	54,500	152,899
<i>Solomon Islands.</i>							
Hongainville	3,083	2,665	1,187	1,135	9,160	23,500	32,660
Buka and adjoining islands	2,831	2,038	1,017	924	6,810	—	6,810
Nissan Islands	567	499	300	196	1,562	—	1,562
Kihmellau Islands	104	122	83	80	391	—	391
Nuguria, Tauu & Nukumanu Islands	82	71	46	19	218	—	218
Total Solomon Islands	7,567	5,585	2,635	2,354	18,141	23,500	41,641
<i>North-east New Guinea.</i>							
District of Morobe	1,942	1,872	949	646	5,409	No estimate made	5,409
District of Alitape	2,340	1,643	1,022	713	5,724	—	5,724
District of Madang	8,169	7,249	4,965	3,999	24,402	—	24,402
Total North-east New Guinea	12,457	10,764	6,956	5,358	35,535	—	35,535
Grand total for the Territory	57,115	46,834	26,918	21,708	152,075	78,000 ¹	230,075 ¹

¹ Not including any estimate of the population of North-east New Guinea not under Government influence.

TABLE II

TERRITORY OF NEW GUINEA. NATIVE POPULATION, 1921¹

ISLANDS	COUNTED.				Total Counted.	Estimated.	Total
	Men	Women.	Boys.	Girls			
<i>Bismarck Archipelago</i>							
New Britain, Duke of York, and Vitu Islands—Gazelle Peninsula and adjacent islands	26,789	17,907	9,966	9,957	64,619	—	64,619
Remainder of New Britain	1,024	581	568	517	2,085	—	2,085
Duke of York Group	(2)	(2)	(2)	(2)	(2)	—	(2)
Vitu Islands	—	—	—	—	—	—	—
Total New Britain, etc.	27,813	18,488	10,529	10,474	67,804	13,000	80,804
<i>New Ireland and Lavongai (New Hanover).</i>							
New Ireland (District of Namatanai)	3,600	2,423	1,043	1,050	8,215	—	8,215
New Ireland (District of Kavieng)	6,323	4,025	1,264	1,647	13,259	—	13,259
Islands between New Ireland and Lavongai	321	199	61	101	682	—	682
Lavongai	3,104	2,288	719	770	6,876	—	6,876
Musaui, Emirau and Tench Island	1,027(3)	684(3)	203(3)	250(3)	2,170(3)	—	2,170(3)
Tabar and Sumber Islands	1,431	917	150	282	2,780	—	2,780
Lühr Islands	1,284	1,031	203	202	2,875	—	2,875
Tanga Islands	491	343	107	97	1,040	—	1,040
Anir Islands	842	108	92	72	704	—	704
Total New Ireland & Lavongai, etc.	14,020	12,103	3,971	4,526	34,620	—	34,620
<i>Admiralty and North-Western Islands</i>							
Admiralty Islands	5,054	3,645	1,260	1,549	11,622	—	11,622
North-Western Islands	316	182	125	157	780	—	780
Total Admiralty & North-Western Islands	5,375	3,827	1,424	1,756	12,402	—	12,402
Total Bismarck Archipelago	51,208	34,434	15,924	16,756	118,326	13,000	131,326
<i>Solomon Islands</i>							
Bougainville	8,238	5,504	2,130	2,100	17,976	—	17,976
Buka and adjoining islands	3,060	2,287	1,133	1,067	7,576	—	7,576
Nissan Islands	477	345	143	126	1,091	—	1,091
Kilmaillau Islands	(4)	(4)	(4)	(4)	(4)	—	(4)
Nuguria, Tauu & Nukumanu Islands	50(5)	47(5)	40(5)	34(5)	180(5)	—	180(5)
Total Solomon Islands	11,833	8,187	3,446	3,357	26,823	20,000	46,823
<i>North-east New Guinea</i>							
District of Morobe	5,544	3,267	2,721	2,174	13,736	30,500	—
District of Aitape	5,070	3,380	2,427	1,605	12,441		—
District of Madang	6,983	4,239	2,027	2,142	16,101		—
Total North-east New Guinea	17,506	10,806	8,075	5,921	42,308	30,500	72,808
Grand total for the Territory	80,547	53,491	27,445	26,034	187,517	63,500(1)	251,017(1)

N.B.—These tables are reproduced from *Statistics relating to Commerce, Native Tax, Population, etc.*, in connexion with the late German New Guinea Possessions. Translated from German official documents. Published by the Government of the Commonwealth of Australia.

(1) Not including any estimate of the population of North-east New Guinea not under Government influence (2) Included in remainder of New Britain. (3) Not including Tench Island. (4) Included in Buka and adjoining islands. (5) Nuguria Islands included in Buka and adjoining islands.

¹ The areas are, in most of the islands, not the same as for the count and estimate of 1914, and accordingly no direct comparison can be made between the totals for the two years.

² These are rough estimates only.

TABLE III

POPULATION OF AUA ISLAND (N. OF BRIT. NEW GUINEA)

<i>Year.</i>	<i>Male.</i>	<i>Female.</i>	<i>Total Pop.</i>
1911	201	152	353
1921	181	131	312

BIRTHS AND DEATHS DURING PERIOD 1911 TO 1921.

<i>Ten year period</i>	<i>Male births.</i>		<i>Female births.</i>	
1911-1921.	42		41	
	„ deaths	62	„ deaths.	62

SEX-RATIOS

<i>Ten year period</i>	<i>Masculinity of birth-rate</i>	<i>per 100 both sexes</i>
	death-rate	1.20
1911-1921	total population (1921)	0.
„	children under 14 years of age (1921)	16.02
		21.31

N.B.—No figures available previous to 1911, but I was assured that for some two or three years at least after the disaster of 1904 there was still a preponderance of women which lasted until an epidemic of dysentery in 1909. The epidemic spread rapidly through the island, and there was a heavy death roll. The women are reported to have suffered much more heavily than the men.

In 1916 there were 33 deaths, 19 males and 14 females. Of these 23 died from typhoid brought from Ninigo by an Aua woman married to a Ninigo man and returned to her native island.

TABLE IV

AUA ISLAND (N. OF BRIT. NEW GUINEA)

Showing Age and Sex of Surviving Children under Fourteen Years of Age (i.e. born since 1908)

<i>Born.</i>	<i>Age in 1921.</i>	<i>Boys.</i>	<i>Girls.</i>
1908	13	1	1
1909	12	3	1
1910	11	4	4
1911	10	2	1
1912	9	5	3
1913	8	3	1
1914	7	5	1
1915	6	1	—
1916	5	1	3
1917	4	3	1
1918	3	2	—
1919	2	3	2
1920	1	2	5
1921		2	1
		<u>37</u>	<u>24</u>

APPENDIX VI

TABLE V

AUA ISLAND (N. OF BRIT. NEW GUINEA)

Death Roll in 1921 (Jan. to Oct.)

No.	Sex.	Age in Years.	Causes.
1.	Male	40	Malaria. ¹
2.	Female	26	"
3.	"	25	"
4.	Male	40	"
5.	Female	26	"
6.	Male	29	"
7.	"	45	"
8.	Female	50	"
9.	Male	35	Poison fish.
10.	Female	32	" "
11.	"	24	In childbirth
12.	"	(4 months)	Lack of nourishment
13.	" (orphan)	1	Heart failure through lack of nourishment.
14.	"	70	Old age and chill She was the witch "Funari".

Males, 5. Females, 9.

¹ In the great majority of cases those who succumb to malaria are tubercular subjects.

APPENDIX VII

WHITE AUSTRALIAN POPULATION

TABLE

MASCULINITY OF AUSTRALIAN POPULATION FROM 1860 TO 1922

Year	Rates, i.e. Number per 1,000 of Population			Masculinity of Births.	Rate of Infant Mortality (No of deaths under one year per 1,000 births).	Masculinity of Infant Deaths.	Masculinity of Stillbirths in Western Australia.	Masculinity General Population.
	Births	Deaths	Marriages					
1860	42.56	20.86	8.42	2.52	128.34			16.72
1861	42.28	17.34	8.04	2.65	104.52			14.00
1862	43.27	17.61	8.76	3.09	123.05			13.29
1863	41.00	17.28	8.37	2.14	110.82			11.85
1864	42.01	16.33	8.61	3.19	110.38			11.75
1865	42.10	16.62	8.34	2.08	122.04			11.26
1870	38.06	14.17	7.12	2.81	111.04			0.54
1875	35.68	19.67	7.28	1.91	139.50			8.39
1880	35.25	14.58	7.17	2.48	117.46			7.95
1885	36.09	16.04	8.16	2.28	128.53			8.39
1890	34.98	14.31	7.64	1.76	107.47			7.43
1895	30.38	12.45	6.23	2.58	101.28			6.28
1897	28.21	12.12	6.08	2.23	104.60	9.86	14.58	6.00
1898	27.15	14.12	6.72	2.80	127.59	10.12	15.62	5.74
1899	27.27	12.91	7.03	2.21	116.30	9.20	81.45	5.44
1900	27.93	11.78	7.24	2.41	99.03	10.90	26.97	5.01
1901	27.16	12.22	7.32	2.01	103.61	10.41	17.24	4.83
1902	26.71	12.40	7.20	2.39	107.15	9.10	14.79	4.66
1903	25.20	12.15	6.67	2.41	111.36	9.51	4.95	4.43
1904	26.41	11.05	7.02	2.50	81.77	10.75	5.15	4.32
1905	26.23	10.38	7.25	2.72	61.70	13.62	9.91	4.15
1906	26.57	10.92	7.49	2.01	83.26	11.37	23.00	3.96
1907	26.76	10.60	7.87	2.38	81.06	11.64	12.56	3.61
1908	26.59	11.07	7.76	2.40	77.78	12.61	10.82	3.68
1909	26.09	10.88	7.90	2.54	71.50	12.80	15.08	3.71
1910	26.73	10.43	8.37	3.09	74.81	12.52	7.76	3.70
1911	27.20	10.66	8.79	2.31	68.49	13.89	23.70	4.17
1912	28.59	11.21	9.06	2.22	71.74	14.06	17.03	4.42
1913	28.15	10.74	8.63	2.32	72.21	11.07	4.23	4.41
1914	27.00	10.46	8.76	2.34	71.47	13.21	16.39	3.68
1915	26.56	10.59	9.07	2.30	67.52	12.59	4.98	1.73
1916	26.27	10.95	8.14	2.73	70.33	12.21	26.32	0.90
1917	26.00	9.71	9.00	2.62	55.91	16.40	8.93	1.31
1918	25.05	9.99	6.59	2.53	58.57	13.47	14.40	0.96
1919	23.53	12.69	7.80	2.92	60.21	13.47	1.88	1.74
1920	25.45	10.50	6.02	3.01	66.14	14.22	0.61	1.08
1921	24.95	9.91	8.59	2.85	65.73	14.19	11.11	1.38
1922	24.69	9.21	8.18	2.67	52.74	18.03	13.71	1.74

Masculinity represents excess of Males over Females per 100 of sexes combined.
Compiled from figures supplied by the Commonwealth Statistician.
Masculinity of stillbirths is procurable only for Western Australia.

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